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Editorial.

THE STANDARD OF EXAMINATION.

AFTER much debate, and by a narrow majority, the Scottish Schools have obtained justice in the matter of Entrance Examinations. We do not wish to be thought tedious or prolix, but we must run that risk in our desire to defend not only ourselves as teachers, but also the youth of the country, and of the northern part specially. In doing this we are simply performing the task which has fallen to our lot, for good or for evil; to neglect it would be to act a base and cowardly part, and one, therefore, quite inconsistent with the high calling of a veterinary surgeon. For if there were no schools, how could the profession be recruited? The schools are, as it were, the roots of the veterinary tree; they provide contact with the great mother of us all, to wit, the nation; they gather in the sap which is to vivify and sustain both trunk and branches; without them there would be no growth, and when growth ceases death is at hand. All this seems very obvious, quite commonplace, and ought to be unnecessary. Yet we hear at nearly every Council Meeting grumbling and complaints because the schools ask for due recognition of their rights. It is true some of us have to keep on demanding these rights because we depend for our bread and butter upon the prosperity of the schools, but is it a heinous crime to ask for bread and butter in return for honest work? Let those fastidious gentlemen who affect to be weary of our demands reflect that, when any part of an organism ceases to respond to injury, there is immediate danger, and a strong presumption that mortification has set in. We regret to offend delicate and sensitive ears with what may be disdainfully called our clamour, but we must do our duty even at that heavy risk.

Readers of the VETERINARY JOURNAL know that we have persistently striven to uphold a high standard of Entrance Examination for our candidates. We would gladly have followed in the track of the medical profession, but it appears that we were destined to fail. And by the way, when one thinks of it, had we been able to follow out our too lofty aspirations, the heart of Professor Penberthy would have rejoiced, for young men, finding that the same examination admitted them to either a veterinary or a

medical career, might in some instances have chosen the latter, and then the King would have had a still greater supply of the medical officers for whom, according to the loyal and self-sacrificing Professor Penberthy, his royal heart yearns. And the veterinary profession? A fig for the veterinary profession, says Professor Penberthy, let the King have his merry men of the lancet and the scalpel, and let the knights of the fleam and the iron go hang! A most noble and patriotic sentiment. We hope we are as loyal subjects of King Edward as Professor Penberthy is, but we cannot really go this extravagant length, we must honestly refuse to cast ourselves beneath the royal car. Besides, as has been made abundantly manifest, we in the north should only have made ourselves ridiculous by doing so, for those wise and prudent men who rule at Camden Town would simply have picked up our students from the mud and left our unhappy selves to act the fanatic. In other words, the London College has complacently accepted the situation, and consented to remain where the medicals were five years ago; they get examination papers of this calibre from the College of Preceptors, and they and their students are quite satisfied, as is perhaps natural. We in Scotland are differently placed. Our examining bodies have raised their papers to the level demanded by the General Medical Council, and we have either to impose this higher test on our candidates or let them go to England for examination. This is obviously unfair, and we have striven to remedy the injustice. We have been twitted and taunted by our English brethren, and we have been told that the College of Preceptors will hold an examination in Edinburgh or Glasgow if requested to do so, but this is not such a simple solution of the difficulty as it seems. In the first place, English and Scottish methods of education differ considerably, and in the second place the College of Preceptors will not hold a special examination in Scotland—naturally enough—unless certain guarantees are given, certain formalities complied with, and certain additional fees paid. No wonder, then, that our hair has become grey. (By the way it is curious to notice that Professor M'Call is a little astray regarding his quotation on this subject. If we had any money we should offer a nice little prize to the readers of this Journal—including, of course, our learned friend—who should trace the phrase to its place of origin, and let us know, say, by post-card to be here on the first Monday in May. Not to be too hard on the Professor, we might drop the hint that the passage is to be found in the oldest collection of literature known to the most of us, and that it is *not* in the Book of Proverbs.)

As the result of our agitation we have obtained leave from the Royal College to send in our candidates to an examination to be held by the Educational Institute of Scotland, which is to be on the level sanctioned by the Royal Medical Council in 1896. Let there be no misunderstanding as to our motives, and no further aspersions on our conduct and tactics made by Professor Edgar or

anybody else. It is not we in Scotland who have lagged behind the medicals; it is the Camden Town institution alone which has shown this supineness—or prudence, if our readers prefer. If any one says we have tried to throw dust in the eyes of the Council, and schemed for a lowering of the standard to suit our selfish purposes, such a man is guilty of quite gratuitous impertinence, and we hurl back the taunt in his face. And let no one disparage the examinations of the Educational Institute of Scotland. That body justly holds its head very high. Its examinations are accepted as a satisfactory test by the General Medical Counnil; its papers are printed every year for public inspection, and can stand the most rigid and searching scrutiny; readers of this Journal may remember the report made by an Oxford scholar on the comparative merits of the two examinations which we printed last year. We can only repeat, as a summary of the whole wretched dispute, what we said a month or two ago; we are anxious, we have all along been anxious, to maintain a high standard of Entrance Examinations, in order to maintain thereby the intellectual prestige of our profession, but we cannot afford to wage a war of tariffs with London; if the port of London insists on keeping its import duty at the figures of 1896, whilst expecting us to raise ours by 25 per cent., it asks what is unreasonable and indeed impossible. We have the choice either to accept the low London rate or to shut our doors, and we prefer not to shut our doors.

THE CAMBRIDGE CASE.

THERE is considerable discontent among a large number of the members of the profession at the refusal of the Council to reopen this case.

An agitation has been raised to obtain the requisite number of members of the profession (seventy-five) to sign a request to the President to call a Special General Meeting of the profession. Should this be successful, and the General Meeting decide that the question be reopened, that decision will virtually mean that the profession pass a vote of want of confidence in the Council, and it, or anyhow those Members of it who upset the finding of the Committee, will in honour require to resign their seats on the Council.

It is an error to say that the Council refused to reopen the case. A *majority* of the Council, on the motion of Mr. Trigger, seconded by Mr. Lawson, decided to "proceed to the next business," though Mr. Bower, seconded by Professor W. O. Williams, proposed that the case be reopened.

We have read more than one statement of the case, but were not present at the Committee Meeting, and therefore cannot give an unbiassed opinion, but as the matter involves the honour of one man and the professional knowledge of another, we trust that right has been or shall be done.

Royal College of Veterinary Surgeons.

A QUARTERLY MEETING of the Council of the Royal College of Veterinary Surgeons was held on Friday, April 12th, at the College, Mr. A. C. Cope, President, occupying the chair. The following members were present:—Sir Frederick Fitzwygram, Colonel Duck, Messrs. Abson, Allen, Barrett, Byrne, Carter, Dewar, Edgar, Hartley, Lawson, Locke, Mason, M'Call, M'I. M'Call, M'Fadyean, Mulvey, Penberthy, Pritchard, Simpson, Trigger, Villar, Wartnaby, W. O. Williams, and Wragg; also the Solicitor, Mr. Thatcher, and the Secretary, Mr. Hill.

The minutes of the previous meetings were taken as read, and confirmed.

CORRESPONDENCE.

A letter from the Home Office, signed by Mr. Charles T. Ritchie, was read, conveying to the College His Majesty's thanks for the loyal and dutiful resolution of the Council expressing sympathy on the occasion of the lamented death of her late Majesty, and congratulation on His Majesty's accession to the throne.

A letter was read from Professor W. Owen Williams, in which he thanked the Council, on behalf of himself and the other members of his family, for the kind letter of sympathy and condolence in their irreparable loss.

The letters were ordered to be placed upon the minutes, on the motion of Mr. Locke, seconded by Professor M'I. M'Call.

Letters were read from Professor Edgar and Mr. Winter, in which they informed the Council that they should not seek re-election at the forthcoming election of Council, Mr. Winter resigning.

On the motion of Mr. MULVEY, seconded by Mr. Lawson, the resignation was accepted.

A letter from Mr. W. Pallin was read, in which he stated that owing to pressure of public and private business he did not intend to seek re-election as examiner; also a letter from Mr. John Freeman resigning his position as examiner.

Mr. MULVEY moved that a very sincere vote of thanks be given to the gentlemen who had acted as examiners for so many years,—Mr. Freeman, Mr. Pallin, and Professor Sims Woodhead.

The PRESIDENT said that no letter had been received from Dr. Woodhead resigning.

Mr. MULVEY said Dr. Woodhead had intimated that he would not seek re-election.

The PRESIDENT.—To whom?

Mr. MULVEY.—Generally.

Mr. Wragg had very great pleasure in seconding the motion, which on being put was carried unanimously.

OBITUARY LIST.

The Obituary List, which was read by the Secretary, contained eighteen names.

Mr. WRAGG, having pointed out that Mr. Thomas Campbell of Kirkcudbright was at one time an examiner on the Board, moved that a vote of condolence should be sent to his family.

Mr. MULVEY seconded the motion, which was agreed to.

REPORTS OF COMMITTEES.

FINANCE COMMITTEE.

Mr. TRIGGER read the Report, which, amongst other things, stated that at the present time the bank balance was £106 : 13s. Mr. Trigger moved its adoption, which was seconded by Mr. Lawson and carried.

REGISTRATION COMMITTEE.

Mr. SIMPSON, as Chairman of the Committee, read the Report, in which the restoration of certain names to the register was recommended. The Committee reported that they had considered a case against a veterinary surgeon in regard to a certificate in connection with diseased meat, and were of opinion that no evidence sufficient to warrant the interference of the College had been disclosed. They had also considered a complaint made against a member of disgraceful conduct in a professional respect, but although they found the charge proven, did not make any recommendation. Mr. Simpson moved the adoption of the Report, Mr. Lawson seconding.

Professor M'CALL moved that the Solicitor should make inquiries into a matter in connection with a practitioner in the neighbourhood of Glasgow.

Mr. BARRETT, in seconding the motion of Professor M'Call, said he felt that when the case referred to came before the Committee, the Committee were in a sense desirous of shirking an investigation into the facts ("No")—at least there appeared to be a tendency not to give the case the attention which it deserved.

Mr. MULVEY.—That is untrue.

Mr. BARRETT said, when he moved at the last meeting that the matter should be referred to the Solicitor, he was met with a chorus of disapprobation.

Mr. WRAGG moved that the case be referred back to the Registration Committee, which was seconded by Mr. Locke.

Professor M'CALL having withdrawn his motion, the amendment was put and carried.

The Report of the Registration Committee without the paragraph referring to the case was then adopted, and the authority of the College attached to the prosecutions recommended.

Professor PENBERTHY asked why, in regard to the case in which the Committee had found a charge of disgraceful conduct in a professional respect proved, no recommendation or suggestion had been made in the Report as heretofore?

Mr. THATCHER (Solicitor) said the Committee had acted under Section 8 of the Veterinary Surgeons Act, 1881, which said,—"The Report of the Committee, after hearing the person concerned, if he so desires, shall be for the purpose aforesaid conclusive as to the facts, but so that the Council shall form their own judgment on the case independently of any opinion of the Committee."

Mr. BARRETT moved, and Professor M'I. M'Call seconded, that a letter of censure should be written to the member.

Mr. MULVEY thought that was scarcely sufficient.

Professor PENBERTHY proposed as an amendment the removal of the

name from the Register, and the reconsideration of the case on the application of the member after a period of twelve months.

Mr. MULVEY seconded, and the original motion having been withdrawn, the amendment was carried.

EXAMINATION COMMITTEE.

Mr. MULVEY read the report of the Committee, and moved its adoption. The Report dealt, amongst other things, with the subject of the Walley Memorial Prize Fund, and recommended that the amount of the year's proceeds of the Fund, £7 : 6 : 10, should be sent to Mr. W. S. Harris, the successful candidate.

Mr. ABSON seconded the motion.

In reply to a question by Professor M'Call, Mr. Trigger said the College lost about £50 on the Christmas Examinations in Scotland. The Report was adopted.

The Report of the Library and Museum Committees was also adopted.

ELECTION OF EXAMINERS.

Mr. BYRNE asked if any testimonials with regard to the candidates could be placed before the members. He had examined bye-law 76, which stated that the name and qualification of each candidate should be suspended on the notice board of the College, but he had seen no statements of the qualifications of any of the candidates. He thought it was a gross anomaly and not at all to the credit of the Council. He knew absolutely nothing about the gentlemen he was asked to vote for.

The SOLICITOR pointed out that the qualifications appeared on the agenda.

MEMBERSHIP EXAMINATION, APRIL 1901.

Class A.

Anatomy of Domesticated Animals . . .	Elected—W. Harvey Bloye (23) and J. Blakeway (21). Not elected—W. Robb (3) and J. M. Young (1).
Chemistry and Elementary Physics . .	Elected—J M. H. Somerville (22) and J. M. H. Munro (16). Not elected—James Hendrick (8).
Biology, Elementary Zoology, and Botany .	Elected—J. Reynolds Green (19) and J. R. Ainsworth Davis (16).

Class B.

Anatomy of Domesticated Animals . . .	Elected—Geo. Fleming (24) and W. F. Peacock (22). Not elected—J. M'Lauchlan Young (3).

Physiology and Histology—Elected—T. H. Milroy and J. B. Haycraft.

Stable Management.—The first ballot resulted as follows :—R. Moore (18), Albert Wheatley (10), W. Cargill Patrick (4), C. Sheather (4), H. J. Dawes (4), J. B. Wolstenholme (3), William Wilson (3), J. Peddie (1). J. Mackinder (1), J. M. Young (0).

The PRESIDENT declared Mr. R. Moore elected, and a second ballot necessary for the election of one other examiner. The second ballot

resulted as follows:—Albert Wheatley (16), J. B. Wolstenholme (4), C. Sheather (2), H. J. Dawes (2), William Wilson (1), Messrs. Young, Patrick, Peddie, and Mackinder receiving no votes. Mr. Wheatley was therefore elected.

Class C.

On the motion of Mr. LOCK, second by Mr. MULVEY, Messrs. R. F. C. Leith and George Dean were elected examiners in Morbid Anatomy, Pathology, and Bacteriology.

Materia Medica, Pharmacy, &c. . . { Elected—James Clark (20) and F. T. G. Hobday (17). Not elected—E. W. Hoare (6), W. Robb (5), and J. Donald (0).

Veterinary Hygiene and Dietetics.—In connection with this election a question was raised by Mr. Lock as to the eligibility of a retiring Member of Council for election as examiner, his name appearing in the list of candidates. The Solicitor pointed out that the question was governed by section 5 of the Charter of 1893. The election was then taken, and the first ballot resulted as follows:—

Elected—W. Woods (20).

Not elected—Wm. Robb (10), J. A. Nunn (9), J. B. Wolstenholme (3), J. Peddie (2), J. A. Meredith (2), J. M. Young (1), and E. C. Winter (1).

In the second ballot J. A. Nunn received 12 votes, William Robb 9, J. B. Wolstenholme 2, and E. C. Winter 1.

A third ballot being necessary, as no candidate had received a requisite majority, on the motion of Mr. SIMPSON, seconded by Professor M'CALL, it was agreed that in the third ballot only the names of Colonel Nunn and Mr. Robb should be voted for. The voting was then taken, and resulted in the election of Colonel Nunn, who received 14 votes against Mr. Robb's 11.

Class D.

Principles of Veterinary Medicine.—Elected—J. Malcolm (23), N. Almond (18). Not elected—M. Hedley (6).

Principles of Veterinary Surgery.—Elected—H. Olver and W. Hunting.

Class C—Three Years' Course.

On the motion of Mr. MULVEY, seconded by Mr. SIMPSON, it was agreed that the examiners elected for the Class C, four years, should act as examiners in the oral division, and the examiners elected for the Class D, four years, act as examiners in the practical division of Class C, three years' course.

Class B—Three Years' Course.

Mr. MULVEY moved the appointment of Messrs. Fleming and Peacock, and Messrs. Milroy and Haycraft, as examiners in Class B, three years' course.

FELLOWSHIP EXAMINATION, April 1901.

Veterinary Medicine and Surgery, . . { Elected—James M'Queen (15). Not elected—J. A. Nunn (10).

Veterinary Hygiene and Sanitary Science, . { Elected—George Fleming (20). Not elected—J. M. Young (2), J. A. Nunn (1).

Pathology and Bacteriology, . . . { Elected—John Malcolm.

DATE OF FELLOWSHIP EXAMINATION.

It was agreed, on the motion of Professor W. OWEN WILLIAMS, that the Fellowship Examination should be held in Edinburgh on May 24th.

SCRUTINEERS.

It was resolved that the Scrutineers appointed last year should be asked to act again, the President being empowered to fill up the vacancies should any gentleman decline to act again.

ANNUAL DINNER.

It was agreed to hold the annual dinner as usual, the following gentlemen being appointed to act as a Dinner Committee—the President, Mr. Mulvey, Mr. Wragg, Mr. Barrett, and Mr. Simpson.

In accordance with the notice on the agenda, that Mr. Simpson would draw attention to the fact that the position of the officers of the Army Veterinary Department remained unchanged since the Council first approached the War Office, Mr. SIMPSON said the Members knew that the complaint of the Army Veterinary Department, and the profession as a whole, was the non-recognition of the members of the Department as compared with the recognition that was given to officers of the Army Medical Department. The other complaints were that the pay of their brethren in the Army was insufficient, that the pension allowance was insufficient, and that the Army Medical Department had the privilege of combatant titles, while the Veterinary Surgeons had not. It had been stated that the members of the Veterinary Department were not proud of their title as Veterinary Surgeons, but that had absolutely nothing whatever to do with it. He had always maintained that there was never any occasion for dropping the title of surgeon in the case of the doctors, but seeing that the surgeons of the Army are allowed to drop their title, and that every other Department in the Army was allowed to do the same, from the Medical Department down to the schoolmaster, and were allowed to call themselves Lieutenant, Captain, and so on, whilst the veterinary profession was the only non-combatant Department in the Army which was deprived of that privilege, it would be seen there was a grievance. It might be said that they had tried to remedy this and had failed, but he maintained that progress had been made. It was only half a secret that the term of service between promotion from Lieutenant to Captain would be reduced from ten years, for not only had a recommendation been made at the War Office, but he believed within a very short time it would be reduced to seven years. There had also been some slight increases made in the pay. It was true that at the present time the question of title was kept in the background, but if they persevered with the War Office they would get all that was wanted. General Fitzwygram's idea agreed to some extent with his, that a small committee should be appointed to wait upon the Minister for War. One Minister of War had declined to receive a deputation, but the present one might not decline to do so. Respectful answers had been received from the late Minister, and more than half promises made in the House of Commons. In reply to a communication, it was said that the subject of the Veterinary Department would have consideration at the termination of the war. It was evident that the war was sufficiently at an end for some of the grievances to be considered, as the War Office had already considered the question of

increased retirement pay and the decrease of the time of the service before a man attained the rank of captain. He suggested that the committee should lay before the Minister of War such facts as these, that the same length of education had to be undergone by the veterinary student as the medical student, that the certificate which admitted to membership of the profession was on an equality with that of the Army Medical Corps. Candidates for the A.V.D. were hardly to be found at the present time. Men returning from South Africa had been approached and asked to join the Department, but they had nearly all said, "No, not under existing conditions." It was acknowledged by many men that the best men took the Fitzwygram prizes, but there was not an instance of a Fitzwygram prizeman ever going into the Army. He had General Fitzwygram's statement, "None of my prizemen ever join the A.V.D."

Professor W. OWEN WILLIAMS said there was the late Dr. Haslam, and, he thought, one of the Moores.

Professor EDGAR said there was Slide and, he thought, one of the Moores.

Mr. J. F. SIMPSON said he gave it for what it was worth. He therefore formally moved, "That a small committee of five be appointed to ascertain whether the Minister for War would be willing to receive a deputation, in order that a deputation may lay before him the desires of the veterinary profession as a whole, and that, in the event of the Minister of War not seeing his way to receive a deputation, the committee shall draw up a statement to be forwarded to the Minister of War."

Professor PENBERTHY seconded the motion, which was carried unanimously.

Messrs. Simpson, Mulvey, Villar, M'Fadyean, Lawson, Penberthy, and the President were elected members of the committee, the President asking to be allowed a little time to consider whether he should serve or not, as, being a public officer, he did not think he could very well approach another Department.

MOTION BY MR. VILLAR.

Mr. VILLAR brought before the Council some evidence given by an officer of the Royal Society for the Prevention of Cruelty to Animals in a case heard in the provinces during the early part of the year. The evidence, he considered, was really expert evidence, which should have been given by a veterinary surgeon. He moved that the Secretary be instructed to write to the Secretary of the R.S.P.C.A. drawing his attention to the evidence and pointing out to him that the giving of such evidence in civil actions by the society's officers was prejudicial to the interests of justice, and asking him to discountenance such action on the part of his inspectors.

Mr. BARRETT seconded the motion.

Mr. WRAGG mentioned that he had read the evidence at the Committee of the Royal Society for the Prevention of Cruelty to Animals, and both the secretary and the committee deprecated the action of their officer, and it was decided that the secretary should make inquiries.

Mr. TRIGGER moved as an amendment the deletion of the latter part of the resolution, viz., that the giving of such evidence in civil actions was prejudicial to the interests of justice, &c.

Professor EDGAR seconded, but the amendment on being put was lost, and the original motion carried.

NOTICE OF MOTION BY THE PRESIDENT.

The PRESIDENT gave notice that it was his intention to propose at the next meeting of Council in July that Dr. Bang, Veterinary Adviser to the Danish Government, should be elected Foreign Associate of the College. Notice of the motion would be duly suspended in the room.

This finished the business of the quarterly meeting.

SPECIAL MEETING.

A special meeting of Council was afterwards held. Mr. A. C. Cope presided, and the members signing the obligation book were those of the previous meeting, excepting Sir Frederick Fitzwygram and Professor M'Fadyean. At the commencement of the proceedings Mr. Trigger moved, having regard to the lateness of the hour and the fact that a large number of members of Council had been obliged to leave for home, that the special meeting of Council should not be held. He thought the business was too important to be taken at such a late hour of the evening.

Mr. WRAGG seconded the motion.

Mr. SIMPSON thought it would be very improper, in face of the fact that gentlemen had travelled long distances to speak for or against the business of the agenda, that the special meeting should be adjourned.

Professor M'I. M'CALL claimed the right to have his motion brought before the meeting, as that was the last meeting of Council of which he was a member unless he was re-elected.

Professor EDGAR pointed out that it would be also his last opportunity of bringing forward his resolution.

Mr. TRIGGER, however, pressed his motion, and Professor M'CALL moved that the proceedings should be continued.

Professor WILLIAMS seconded the amendment, and Mr. TRIGGER agreed to withdraw his resolution, protesting, however, against such important business being gone into after a hard day's work and with a very small Council.

Professor DEWAR had the following notice of motion on the agenda:—"To amend bye-law 52 by the deletion of the words 'on June 30th, 1896'—this bye-law to come into force on the 1st October 1901"; but in view of the other motions on the agenda he withdrew it.

Professor J. M'I. M'CALL then proposed—"That bye-law 52 be altered by the addition of the following words:—'Excepting only that any student who shall present a certificate granted by the Educational Institute of Scotland, showing that he has passed an examination equivalent in all respects to their examination prevailing on the 30th June 1896, and then known as the Preliminary Medical Examination, shall be entitled to registration as a veterinary student.'" He said: The question of the educational examination of the veterinary student, and how to regulate it, is a subject which has troubled the Council of the R.C.V.S. for many days, and unless steps are taken to rectify the inequalities at present existing, it is likely to become, like an unextracted thorn in the flesh, something which is always there to annoy us, and has not even the saving grace of being either useful or ornamental. The hours which have been spent—dare I say wasted?—in this room in the discussion of this subject have been so numerous, and the results so unsatisfactory, as to lead in time to an exemplification of the old proverb which deals with bringing all our

grey hairs with sorrow to the grave—a result which will sooner or later be accomplished if the question is not solved. I do not propose to enter into a lengthened discussion of the various stages through which the preliminary examination of the veterinary student has passed, except so far as is necessary to arrive at a just opinion of the present state, and if possible to insure a satisfactory solution of the problem. It was not until the year 1892 that the Council really took the matter of the preliminary examination of veterinary students into its own hands, and framed a bye-law to regulate it. The bye-law referred to was the following:—"On and after 7th September 1893 students who enter the Veterinary School shall, prior to their first professional examination by the Royal College of Veterinary Surgeons, produce a certificate that they have passed the preliminary general education examination in force after the 1st January 1892 of the General Medical Council, or produce an educational certificate recognised by that body to the Secretary of the R.C.V.S." In other words, this bye-law necessitated our students passing the Medical Preliminary Examination with its probable alteration and amendings for all time, or anybody's examination whose certificates were recognised as an equivalent by the General Medical Council. For some few years this bye-law remained in force, and as the General Medical Council did not raise their standard, events moved along fairly satisfactorily. However, in the year 1896, the Council, recognising the dangerous position they would be in should the General Medical Council suddenly raise their standard, made up their minds to take up a definite position in accordance with the then existing standard of examination of the General Medical Council, and accordingly passed the following bye-law, which still remains:—"Students who enter the Veterinary Schools shall, prior to their first professional examination by the R.C.V.S., produce a certificate entitling the holder to be registered as a medical student on June 30th, 1896." This bye-law gave the schools something definite to work on, and as a consequence they looked around for suitable parties to conduct the examination in accordance with the requirements of the bye-law. The London School found a recognised body of examiners in the College of Preceptors, and as this body conducts presumably the easiest examination which complied with the bye-law, in the form of the Second Division College of Preceptors examination, the London School naturally adopted it, and it was recognised as their preliminary examination for veterinary students. The Scottish Schools, on the other hand, found in the Educational Institute of Scotland a body which conferred on them similar advantages, and consequently adopted the Medical Preliminary Examination of that body as it existed in 1896. Each was satisfied with its preliminary, and harmony reigned, presumably because the standards of the two examinations were on an equal basis. But, unfortunately for the Scottish Schools at any rate, this condition of affairs did not last long, for in the following year the General Medical Council resolved that the standard of examinations should be raised to a very considerable extent. This new regulation of the General Medical Council excluded the second-class certificate of the College of Preceptors from those acceptable for the Medical Preliminary Examination, and necessitated the Educational Institute of Scotland raising considerably the standard of their preliminary examination. However, this did not in any way interfere with the recognised preliminary examination for veterinary students in England, as the College of Preceptors still held the second class second

division examination, and the students still sat for it. But in Scotland it had quite an opposite effect, as it virtually did away with the recognised preliminary examination for veterinary students in accordance with the bye-law of the Royal College, and substituted a new preliminary medical examination of a considerably higher standard. So that since the year 1897 every student who has entered the portals of the Scottish Colleges through the Educational Institute examination has been subjected to an examination of a standard considerably higher than the student who passes into the London School or other College through the College of Preceptors. That this is a manifest injustice no one who gives the matter serious consideration can deny, and it is one that I, with confidence, this day ask the Council to redress. I do not consider that the students who enter the London College should be asked to pass a higher examination than they are at present subjected to, but I do ask that the Council will empower the Institute of Scotland to set an examination on equal lines with that appertaining to the preliminary examination of 1896, and therefore on an equality with that at present set by the College of Preceptors. By passing the addition to bye-law 52, which I am bringing before you to-day, you will attain this object, and confer, not a favour, but an act of justice on the students of the Scottish Schools; and I, with confidence, leave the matter in your hands.

Mr. VILLAR formally seconded the motion.

Mr. BARRETT supported the motion, though with some reluctance. He said he should have preferred that the standard of education in the veterinary profession should be raised, but he was convinced that the standard of 1896 was the utmost that at present, consistent with the interests of the profession and of the community generally, could be obtained. Therefore he thought the time had come when the position of 1896 should be restored. It had been constantly said that the Scottish students had suffered no injustice, but he could not conceive any member holding that opinion who carefully considered the effect of the resolutions of the General Medical Council. The amended regulations of that body in no sense affected the English students. When the Second Class Certificate of the College of Preceptors was deleted from the list of the General Medical Council, the English veterinary student was permitted still to pass a Second Class College of Preceptors and be registered as a student. The Educational Institute of Scotland, however, abandoned the examination, which was regarded as equivalent to the Second Class College of Preceptors, and was not in the position to continue the old examination, and accordingly enacted a higher standard, the effect of which had been that if a student desired to enter an English school he could present himself for the old examination, but if he desired to pass a Scottish preliminary examination he had to submit to the new examination required by the General Medical Council. The Council had to consider, as it had considered *ad nauseam*, whether it would continue to follow the standard adopted by the General Medical Council, or whether it would proceed to adopt the standard of 1896. Looking at the position of the profession generally, the members must come to the conclusion that the time had not come when they could hope to raise the standard of preliminary education. The schools both in England and Scotland had suffered very much from the infliction of the four years' course, and although, perhaps, not much attention should be paid to their complaints, since they existed for the profession, and not the

profession for the schools, yet the Council was justified to a certain measure in listening to the complaints the schools had to lay before it. He thought Professor M'Call's motion seemed to meet the case. In order to satisfy himself as to whether the Institute of Scotland was prepared to conduct the examination on the old lines, he wrote to the Secretary of that Institution asking if the Educational Institute had power to examine students in England for entrance to the medical, legal, and other professions, and if so, whether the Institute would be prepared to conduct an examination in England at stated intervals. He also asked if the Institute was prepared to re-establish an examination precisely similar to the one adopted on the 30th June 1896, and to give certificates to the effect that the examination was similar, and that students had passed the examination. That was a private communication. In reply he was told that the Educational Institute of Scotland had power to examine anywhere, but that financial considerations must determine the extent to which it would do so outside Scotland. It was, however, quite prepared to consider specific proposals to go outside. The one examination in Scotland was the Educational Institute of Scotland; the teachers there were familiar with the subjects and with the peculiarities of the examiners, and knew perfectly well what the nature of their questions would be. He hoped the members would say that the standard of 1896 was sufficient, and that the injustice should be removed.

Professor EDGAR had a notice of motion upon the paper—"To amend bye-law 52 by the deletion of the words 'of June 30th, 1896'—the amendment to come into force on 1st October 1902," and Mr. Simpson suggested that it might be taken as an amendment.

Professor EDGAR stated that if Professor M'Call's motion was passed, he should withdraw his notice of motion, because it would be manifestly an absurdity to ask the Council to stultify itself in that way.

Professor M'CALL said the Scottish schools could not go on as things were at present. The examination there was 25 per cent. in advance of the College of Preceptors, and in another year the examination would be made even higher. The examination which the students passed in Scotland was not only higher than that which the students passed in England, but at the same time it was recognised by the Universities in Scotland. The class tickets which he granted to his students were accepted by the University without any examination at all for the first professional. The certificate granted by the College of Preceptors would not be accepted by the Universities in Scotland, because it was too low.

Professor PENBERTHY—This is an extremely important subject, and has engaged a lot of attention. I think we as a Council have to take cognisance of anything which is stated to be an injustice to any section of our community, and if injustice exists and we can correct it, consonant with our own interests and the interests of the public, it must be corrected. Does that injustice exist? ("Yes.") The injustice exists perhaps, and I sympathise as far as this, that it is implied that the examination carried on by the Institute of Scotland is in some way or other different to the examination carried on by the College of Preceptors. If that difference is detrimental to the Scottish students I sympathise with them, but I have heard no single argument to show that. We know that the College of Preceptors are prepared at any time to hold examinations in Scotland, and to give equal advantages and facilities to Scottish students that they do to the English.

Professor W. O. WILLIAMS—No.

Professor PENBERTHY—I have that from the College itself, and I must ask the Council to take it from me in the same way that it has taken what Mr. Barrett said of the Scottish Institute. There is a great difference between the North Briton and the South Briton. We shall have plenty of students in England from the Scottish Colleges. There are plenty of English students, as there are Scottish students, so that really that injustice, if it does exist, must be very small. Mr. Dollar brought before us perfect evidence of what the Scottish Institute think of the standard for veterinary examinations, and I am bound to say that the letter he read made a very great impression on my mind. I know that the effect of Professor M'Call's pleading touches a chord which is very sympathetic. We are told by Professor M'Call that the students are leaving the veterinary profession and going into the medical profession, but the King wants medical men as well as veterinary surgeons, and therefore some good is being done in that direction. We have tried and succeeded so far in making our examination uniform. We now have the opportunity of having one body to carry out the examinations up to a uniform standard already specified, and it would be the greatest pity to put ourselves into the hands of an examining body who appear to have shown hardly sufficient respect for our position. I believe that is the impression which was left on the minds of a good many people who heard that letter read.

Professor M'CALL asked whether it was a proper thing to bring up a letter read some time ago without producing the letter?

Professor PENBERTHY—To think we can come here with documentary evidence of everything which would become before us in the discussion would be reducing the thing to an absurdity. The letter to which I refer has been before this Council officially.

Mr. BARRETT said he was sorry to interrupt, but thought they ought to have the text of the letter.

The PRESIDENT—I think we had better avoid any reference to it altogether.

Professor PENBERTHY—I bow to your ruling. I am simply dealing with the impressions made on the minds of my colleagues who are here.

Professor M'CALL—I do not object to your referring to the letter if you will only say what was in it. I never heard of it.

Professor PENBERTHY—The letter left the impression on my mind that the Institute of Scotland did not hold in sufficiently high respect the position of the R.C.V.S.

Mr. BARRETT—I submit this is very irregular and hardly fair. Let us have the text of the letter so that we may judge of the effect of it.

Professor PENBERTHY—Mr. Dollar is not here, and the letter cannot be produced. The discussion upon it is in the minutes of the Council, and I will withdraw my remarks with regard to it on the ruling of the Chair.

The PRESIDENT—You had better proceed with your argument.

Professor PENBERTHY—I cannot proceed with my argument unless I have a basis.

The PRESIDENT—Are you going to argue on a letter which we have not seen or heard?

Professor PENBERTHY—I think every member should know the history of his Council. The minutes of these meetings have been published in the professional journals.

Mr. BARRETT—Who wrote the letter?

Professor PENBERTHY—An official of the Institute of Scotland wrote it officially. Professor Dewar knows of it.

Professor DEWAR—He is dead.

Professor PENBERTHY—The College of Preceptors is open to examine not only English students but Scottish students. I have never been a special pleader for the Camden Town School, and I am bound to say I dislike this special representation of schools which is constantly brought before us.—(Hear, hear). I think it is derogatory to the position of this Council that such things should be brought forward as they are brought forward. If the College of Preceptors will remove the injustice which is complained of—and there is no injustice other than a little sentiment—I think that would put this College into a much safer position by having only one body instead of two, but if the Institute of Scotland is going to hold an examination in Scotland, the Institute of Scotland must have an examination in England as well.

Professor W. O. WILLIAMS agreed.

Professor PENBERTHY—I shall propose an amendment that the bye-law remain as it is.

The PRESIDENT—That is simply a negative.

Professor EDGAR said a decided alteration was to be noticed in the stand made by those who were supporting Professor M'Call. A strong appeal was now made to the sense of justice and fairplay of the members of the Council and the profession generally, and a more subtle, ingenious, and wise course to adopt he did not know. Without introducing any fresh arguments, it would be noticed that a kind of geographical atmosphere had been given to the question—"We do not mind having an examination in England, but we do not want an English examination." He would remind the members of those old letters, M.R.C.V.S.L. & E., pernicious things which after years of struggling had been swept away. There was no reason, except a purely pedantic one, why a man should put L. after his letters. The standard in Scotland was supposed to be the same as the standard in England, and that was one great advantage the veterinary profession had over the medical or any other profession. It ought to stir up anxiety to see how Professor Dewar suddenly shifted his ground from time to time. As soon as he saw it was possible to play his cards to some advantage, the so-called professional status might go to the winds, and he wanted to advocate that which he saw clearly lay in the forefront of the matter—school interests. He did not say for one moment that the schools had not an absolute right to support their interests, but the Council had not to legislate for school interests, but for professional interests. Mr. Barrett, with all his legal acumen and powers of argument, had not shown the wonderful inequality which was said to exist. If the examination of the Institute of Scotland was too severe, why did the student go in for that examination?

Professor WILLIAMS—There is no other.

Professor EDGAR—Then the veterinary student is in a curious position if, of all the public examination certificates in this great Empire, none are available for him.

The PRESIDENT—Are they not entered in the bye-law?

Professor EDGAR—Yes, but none of them are sufficiently low, I think, for the veterinary student—none of them sufficiently poor in quality.

Professor M'CALL—None of them have ever been asked to conduct the examination.

Professor EDGAR, continuing, said the Scottish students were not shut

out of the veterinary schools because they could not pass the Institute of Scotland examination, as there were a great many other examinations without that. As he had said before, if the Council was going to legislate for men according to the geographical position, then goodbye to all uniformity.

Professor M'I. M'CALL said there was a standard fixed by the bye-laws, and he was not asking for any alteration of that. The standard was still in existence in England, and he wanted the same standard in Scotland.

Professor EDGAR said the Scottish students could just as easily go through the same portal as the English students.

Professor M'CALL said the objection was to the English students having a lower standard than the Scottish students.

Professor EDGAR replied that the remedy was for the Scottish students to come and pass the same examination. Let the Scotsmen go through the same door as the English students went through, if it were the easier one.

Mr. BARRETT.—Let your men go through the Scottish door!

Professor EDGAR said that was another thing altogether. If the resolution was passed, it established a principle of a separate examination for veterinary students, and then there would be no end to it.

Professor DEWAR said he only wanted justice for the Scottish Schools, and if the motion was not carried, and Professor Edgar brought forward his motion, he would support him simply for the reason that he wanted to have the same preliminary examination in Scotland that they had in England.

Mr. BYRNE said that in voting for Professor M'Call's motion he wished specifically to guard himself against being considered to vote for the lowering of the standard of the preliminary examination. He voted for the motion simply to secure a uniform standard of examination in every part of the Empire.

Mr. SIMPSON said the test of the feeling of the Council was made some time ago, and he abandoned all hope of retaining the examination on an equality with the medical certificates. He observed the change of front with extreme regret, because it could not be forgotten by those who took an active part in the question some six years ago that certain gentlemen went before the profession pledged to keep that examination. It occurred to him that the proposition of Professor M'Call was the next best thing to Professor Edgar's motion in the interests of the profession.

On the motion being put, it was carried, eight voting for and seven against, the names of those voting for being—Professors Dewar, M'Call, M'I. M'Call, and W. O. Williams, and Messrs. Byrne, Villar, Simpson, and Barrett; those against, being Colonel Duck, Professors Edgar and Penberthy, and Messrs. Allen, Mason, Mulvey, and Wragg.

Professor EDGAR's notice of motion was withdrawn, as also a notice of motion in the name of Mr. Trigger in connection with an alteration of bye-law 72.

A vote of thanks to the President brought the meeting to a close.

SPECIAL MEETING.

A Special Meeting of Council was held at the College, 10 Red Lion Square, W.C., on Friday, April 26th, 1901.

Present—Mr. A. C. Cope (President) in the Chair. Professors M'Call, M'I. M'Call, Pritchard, and W. O. Williams, Messrs. Barrett, Bower, J.

A. W. Dollar, Locke, Mason, Mulvey, Simpson, Wragg, Thatcher (Solicitor), and Hill (Secretary).

The SECRETARY read the notice convening the meeting.

ABSENTEES.

The Secretary announced the receipt of letters from Messrs. Abson, Carter, and Hartley, regretting their inability to be present.

MINUTES.

On the motion of Mr. Dollar, seconded by Professor W. O. Williams, the minutes were taken as read.

ALTERATION OF BYELAW.

Professor W. O. WILLIAMS moved the confirmation of the following alteration of byelaw, passed at a Special Meeting held on the 12th inst.:—'That Byelaw 52 be altered by the addition of the following words: 'Excepting only that any student who shall present a certificate granted by the Educational Institute of Scotland, showing that he has passed an examination equivalent in all respects to their examination prevailing on the 30th June 1896, and then known as the Preliminary Medical Examination, shall be entitled to registration as a veterinary student.'"

Professor M'I. M'CALL seconded the motion.

Mr. SIMPSON asked if the passing of the resolution would in any way raise the educational standard as fixed in 1896.

Mr. THATCHER said he did not know the relative values of the two courses of examination. It was a matter for the Examination Committee to decide whether or not the certificate was of the same value as the other. An expert in education could only answer the question by an examination of the two certificates.

Mr. SIMPSON said he understood the resolution to ask for precisely the same certificate for the Educational Institute of Scotland as the College decided to adopt in 1896.

Mr. THATCHER replied in the affirmative.

The resolution was put and carried.

The Special Meeting of Council then terminated.

CANDIDATES FOR ELECTION AS MEMBERS OF COUNCIL.

Candidate.	Proposers.
Gray, Henry, M.R.C.V.S., S. Kensington,	G. H. Gray, A. P. Burgon, A. L. Butters.
Williams, W. O., Edinburgh,	G. J. Bell, J. Lindsay.
M'Kinna, James, Huddersfield,	F. Somers, A. M'Carmick.
Mettam, A. E., Dublin,	A. E. Mettam.
Carter, J. H., Burnley,	J. Abson, W. O. Williams.
M'Call, James M'I., London,	J. F. Simpson, Alex. Lawson.
Wragg, F. W., London,	J. F. Simpson, R. C. Trigger.
Mulvey, A. J., London,	R. C. Trigger, J. F. Simpson.
Cope, A. C., London,	F. W. Wragg, J. F. Simpson.
Shane, E. S., London,	J. Penberthy.
Reekie, Wm. W., London,	R. C. Irving.
Irving, R. C., London,	W. Reekie.
Slocock, Sydney H., Hounslow,	Sidney Villar.

HONOUR TO VETERINARY SURGEONS.

THE *Times* of 20th April contained in its list of honours conferred by His Majesty the gratifying announcement that the dignity of Ordinary Member of the Military Division of the Third Class, or Companion of the Most Honourable Order of the Bath, had been conferred on Veterinary Lieutenant-Colonel Iles Matthews, of the Army Veterinary Department. Further, that the dignity of Ordinary Member of the First Class, or Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George, had been conferred upon Veterinary-Major Charles Rutherford, of the Army Veterinary Department. This is the first time, we think, that such high honours have come the way of our profession, and we offer our sincerest and most respectful congratulations to the gallant officers who have thus been singled out by His Majesty for special recognition of their merits. We feel sure that these great honours have been well deserved, and that they will be gracefully and modestly worn by the fortunate recipients, who must feel that they are in this way representative men on whom the eyes of the whole veterinary world rest with pride and satisfaction. May these decorations conferred on Lieutenant-Colonel Matthews and Major Rutherford be the forerunners of others to be granted by His Majesty to meritorious members of our hard-working and long-suffering profession, and may the King feel that by this gracious act he has won the gratitude and affection of a large body of loyal subjects.

In the list of promotions we are glad to notice the following:—Veterinary-Captains L. J. Blenkinsop and R. W. Raymond to be Veterinary-Majors; Veterinary-Lieutenants H. T. Sawyer, G. M. Williams, and F. W. Wilson, to be Veterinary-Captains.

Original Papers.

DIAGNOSIS OF SHEEP SCAB.[1]

BY FRANK W. GARNETT, M.R.C.V.S., WINDERMERE.

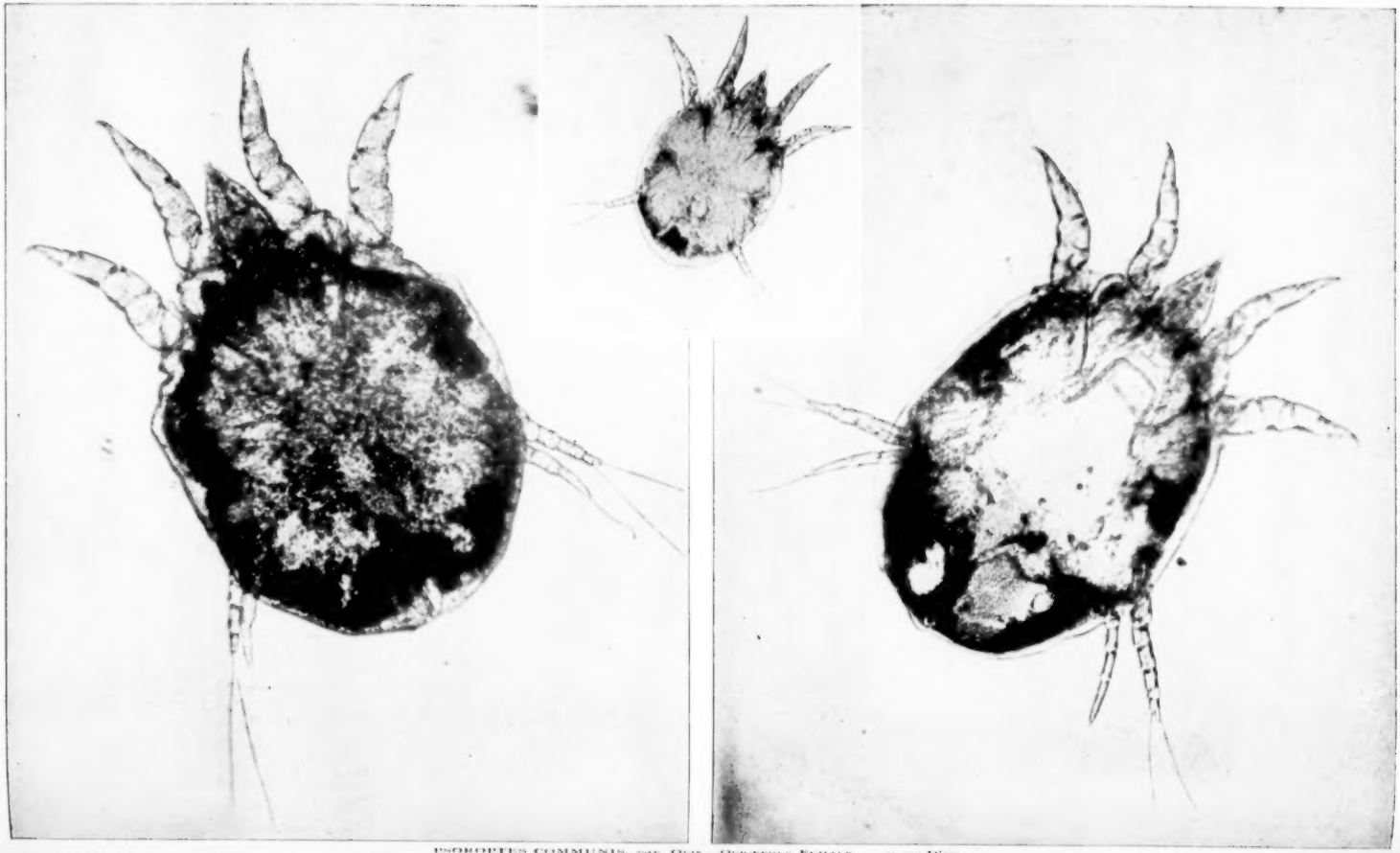
WHEN the Sheep Scab Order of 1898 came into force, the duty was thrown upon veterinary inspectors of certifying the existence or non-existence of the disease.

Although I have been accustomed more or less all my life to sheep scab, it is only since that time that I have thoroughly gone into the symptoms of the disease, and I now make a practice of never certifying the existence of it until I have proved the presence of the acari, which, if they exist at all, is a comparatively easy matter.

The *modus operandi* I now follow is to select and examine the most ragged-looking sheep in the flock, usually finding it extensively affected with a dry yellowish white scab from the top of the shoulders to towards the back of the elbows, or over the sacrum towards the loins; broken in places and bleeding through the constant rubbing, the scab is raised about a quarter to half an inch above the skin, and the affected part is more or less denuded of wool. I find it practically useless to examine any of this scab microscopically, for the acari are rarely to be discovered, and to attempt to do so is but waste of the examiner's time.

[1] Read at a Meeting of the Border Counties Veterinary Medical Society on 19th April.

HEXAPOD LARVA. × 150 Diam.



PSOROPTES COMMUNIS, Gale. OVA. OVIGEROUS FEMALE. × 150 Diam.

What I may call the sheet anchor sign of sheep scab, viz., scratching the scabbed sheep, with the result that it leans towards you and nibbles with its mouth, I entirely disregard, for any sheep suffering from irritating skin affections, such as that caused by *Melophagus ovinus* (Fag or Kead), *Ixoides*, or *Trichodectes sphærocephalus*—to place them in the order of occurring frequency—will behave in this manner, while, on the other hand, sheep only slightly affected with scab show none of the above old-fashioned symptoms, and so may be entirely overlooked.

The zone of active infection is always to be found at the periphery of the dry white scabs, and the scab must be followed down by dividing the wool until a moist, sticky exudate, like a gummy saliva, is found upon the skin, in and upon which exudate, and on the base of the wool, will be seen with the naked eye numbers of small white bodies. Here a portion of the wool must be cut off close to the skin with curved scissors and examined under the microscope, for this purpose. I use a Zeiss a.a. objective No. 1 eyepiece, when the acari will be found in all stages of development with a great preponderance of females; it is almost certain too that some of the small white specks (acari) have adhered to the blades of the scissors.

There is no redness or irritation on this portion of the skin, and scab is entirely absent, but within an inch or so of this glutinous moisture, in a direction away from the dry scab, a distinct irritation is visible, though there are only a few acari to be found upon it. I believe, from the large number of acari to be found in the moist situations (in some cases I have scraped them off in hundreds), that the parasites feed, develop, and multiply on the exudate thrown out from the irritated skin caused by comparatively few acari. As the exudate gradually dries, the scab forms which gives the distinguishing name to the disease, and the parasites migrate further and further afield.

In sheep only slightly affected there may be only a small centre of disease. I have found them about the size of a shilling upon the top of the shoulders or sacrum, denuded more or less of wool, the peculiar moisture on the skin, which is red and irritated round the margin of the affected part, no scab formation, and acari only present in small numbers. It is these cases which are likely to escape the observation of the most careful veterinary inspector, and it is for this reason that where scab has been found to exist in a flock of sheep, it is essential that not only should the affected sheep be picked out and isolated, but that all the remainder which have been in contact with the diseased ones should be dipped and redipped after the expiration of fourteen days. This regulation should be compulsory, and not left to the idiosyncrasies of the controlling authorities. It must be remembered that the purpose of the Order is to rid the country of the disease, and to leave what in my opinion is the key to the whole situation in the hands of County Councillors, however well-intentioned they may be, who know nothing of the nature of the disease they are supposed to be controlling, is an inexcusable weakness on the part of the central authority.

The veterinary inspector has not only to certify the existence of the disease, but upon him is thrown the responsibility of saying when the disease has ceased to exist. It is natural, under these circumstances, that he should keep in mind the not infrequent fact that although the affected sheep may have been dipped two or three times, it is possible that the dipping has been weak or so ineffectually performed that some of the

acari or their ova still exist, and are capable of forming fresh centres of infection; at any rate, these centres must be suspected and searched for away from the positions which are usually the seat of the disease before declaring an infected place free. To carry this out effectually the examination should not take place till fourteen days or more have elapsed since the sheep were last dipped.

If the sheep have been dipped by the owner between the time he has reported the suspected outbreak of the disease to the police and the attendance of the veterinary inspector, as has not infrequently occurred with me, it will be found most difficult indeed to isolate the acari, and I think it would be advisable if the Board of Agriculture were to issue instructions that no dipping should be done until the veterinary inspector had examined the sheep.

Psoroptes communis, var. Ovis, as the parasite is named, which causes the disease, in common with other acari of the same class, passes through several stages of development and assumes different forms in each stage, which are sufficiently marked to distinguish each phase of its life.

In the first stage the recently hatched parasite is known as hexapod larva, the distinguishing features of which are that it has only three pairs of legs, the two anterior pairs terminating with ambulacral suckers, while the third or posterior pair terminate with hairs. Fleming, in his translation of Neumann's Parasites, says "the third pair of legs terminate with suckers;" but this is not so. The smallness of the size of the Psoropt in this stage, when compared with the size it attains in other stages of its life, is so marked that no mistake can be made in recognising it. The larva, after undergoing several moultings, arrives at the second stage of its development, when it is known as a nympha, having now four pairs of legs, the two anterior pairs terminating as in the previous stage, while the two posterior ones end with hairs.

After undergoing two or three more moults, the third—pubescent or adult—stage is reached; this is the final stage for the male, which is now easily distinguishable from all other forms of the Psoropt by having the three anterior pairs of legs terminating with suckers, the fourth pair being rudimentary and ending with hairs; it has also two triangular lobes on the posterior margin of the abdomen and two copulatory suckers. The pubescent stage of the female has the same arrangement of legs as in the nympha stage, which it closely resembles, but it is distinguished from the latter by the vulva and two copulatory tubercles near the posterior margin of the venter surface on either side of the median line.

A single moulting suffices to bring the pubescent female to the next stage, when it is known as an ovigerous female, the first, second, and fourth pairs of legs of which terminate with ambulacral suckers, the third pair alone ending with hairs. This, together with the sub-thoracic vulva and the fact that the Psoropt attains its greatest size in this stage, makes it the one which is most frequently seen.

Each ovigerous female may produce, according to Gerlach, fifteen ova, and by his reckoning a single pair of acari may produce 1,000,000 females and 500,000 males in 90 days.

The development of the ova may be easily followed by placing between two cover-glasses a specimen of wool containing as many ova as possible and fixing the ends together with Canada balsam. The ova are small oval bodies, in the later stages of which, prior to hatching, the doubled-up larva may be distinctly seen through the transparent capsule.

The Psoropt ova, under favourable conditions, will hatch in a few days, but what is of more importance, if intelligible regulations are to be formulated for the suppression of the disease, is to determine the period which, under the most unfavourable circumstances, the ova may produce an active larva. Up to the present time this has not been determined; I have seen them hatch sixteen days after taking them from the sheep, keeping the slide in a drawer in a room with a temperature varying between 45 and 50 degrees Fahrenheit.

Veterinary experience of sheep scab must be accumulating fast since the passing of the last Order, and I trust that the result of these notes, and the discussion which I hope will follow, may be the means of making known an easier, quicker, and more efficient means of diagnosing the disease than has hitherto been available.

In all places where I have used the word dip or dipping I include salving, pouring, smearing, or other means of treating the disease.

REMARKS ON LAMENESS.

BY E. WALLIS HOARE, F.R.C.V.S.

LAMENESS is an interesting study; it is also a very important one to the town practitioner.

Correct diagnosis is the main point in the treatment of lameness, but it is also essential in deciding whether a horse is suffering from a chronic incurable form of lameness or otherwise, and whether he is likely to perform his owner's work.

We must admit that we frequently make errors in both directions. In the first it matters very little, provided the horse goes sound; in the next it may cause us trouble and anxiety if we treat a case for a long period without a successful issue; or, on the other hand, decide that he is useless for the owner's work, when it may happen that he proves useful in other hands.

It is fortunate for horses and their owners that so large a percentage of lame cases recover; what was really wrong with a number of them is difficult to say, because Nature has marked recuperative powers in this direction.

We treat daily lame horses and give opinions as to the cause of the lameness, prescribe rest, liniments, &c., and, if the cases become sound, the public give us credit for correct diagnosis and treatment.

We are frequently puzzled, but have to give an opinion; doubt or a postponement is regarded by the client as evidence of want of skill.

The folly of relying on hard and fast rules for the diagnosis of lameness soon becomes apparent to us, and we learn to depend on observation, and on the history of the case when it can be obtained with any degree of veracity.

With reference to lameness in the fore leg, shoulder lameness, splints, and foot lameness often present features of difficulty.

Shoulder lameness is a very popular form, and the more experience we have in lameness the more we are convinced that its existence is generally imaginary.

In the absence of the history of a recent accident or fall, and of the

characteristic dragging of the toe, we are sceptical as to the existence of shoulder lameness.

The tests by manipulating the region of the shoulder and flexing and extending the leg are simply useless, as many horses will flinch when it is carried out when nothing is amiss in this region. The symptoms of elbow lameness are often characteristic, but too much reliance cannot be placed thereon, and a thorough examination of other regions is necessary before an opinion is formed.

Thus in two cases presenting the characteristics of "dropped elbow," a low ring-bone proved to be the cause of the lameness.

Splint lameness forms a large proportion of our cases.

Experience teaches us that splints may cause lameness at all ages, although more commonly in young horses.

A large number of these cases are treated for shoulder lameness, and even for foot lameness.

Deep-seated splints are not always easy to detect, but in every instance a careful examination of this region is necessary.

Foot lameness often causes anxiety. At one time cases of navicular disease were diagnosed with amazing rapidity; nowadays we are more careful in this respect, as we saw so many cases of supposed navicular disease become perfectly sound.

There is a form of lameness arising from the feet which simulates navicular disease, and concerning which we must confess our ignorance of its pathology.

We are inclined to think it is some form of chronic laminitis; it is usually found in the best-shaped feet, causes intermittent lameness, there is heat, tenderness to the hammer, a gait resembling the early stage of navicular disease; rest, poulticing, &c., render the animal temporarily sound, but without any warning, attacks succeed one another.

But some of these cases recover and do hard work.

A prognosis is difficult, and we have to adopt treatment in order to observe the results.

Investigation is necessary to elucidate what this affection is, but post-mortem examinations are difficult to obtain, as people will not destroy a lame horse for the good of science, so long as he can do any class of work.

To give an opinion of the existence of navicular disease is by no means a simple matter.

This opinion should be a guarded one if we wish to escape falling into error.

We are justified in making a most careful examination of the foot in every case of lameness.

If we neglect this precaution a serious error is sure to be the result.

"Once bitten, twice shy," is a wise and appropriate aphorism for this subject. Nails and foreign bodies in the foot are not readily detected unless the shoe is removed and the foot thoroughly pared out.

Pricks in shoeing may be overlooked, unless care be exercised; and personal supervision is necessary when the foot is being examined, otherwise we may be presented in a short time with a case of quittor.

Errors of this kind cannot be concealed from the owner; unfortunately they are only too plain.

In seeking for the cause of lameness, the smallest details should not be overlooked, as the unexpected often happens.

The Sherlock Holmes method of investigation should be cultivated; it often gives us valuable assistance.

The history of a case as given by the attendants should not be implicitly relied on; they often economise truth sometimes without being aware of it.

The following are object lessons.

A racehorse pulled up lame when finishing a race in the near hind-leg. The groom treated him for a sprained suspensory, and he was sent to a livery stable here, after a long railway journey, and kept for two days.

Attendance requested; the leg was much swollen; had shoe removed, but the groom insisted that it was a case of strained ligament.

After a careful search found a wire nail driven so far into the foot at the point of the frog that it could only be seen with difficulty. On drawing it out a quantity of black pus escaped. The case did very badly for a long time, but ultimately recovered.

No. 2.—A hunter went lame, according to the history given, just after jumping a fence.

Was treated by the groom for a day as hip lameness, and certainly it looked very like it.

I was assured the foot was carefully examined, but sent for a smith a good distance. Had shoe removed and foot pared out. After careful examination found a small sharp stone embedded in the sole, and surrounded by dark-coloured pus.

A free opening soon made matters right.

These examples could easily be multiplied, but they serve sufficiently as object lessons for the young practitioner, who may fancy that he can detect lameness arising from foreign bodies in the foot without going to the trouble of having the shoe off and the foot thoroughly examined.

Nothing is so mortifying to reputation as to prescribe fomentations, liniments, &c. to muscles or joints, and to find after a few days a discharge issuing from the coronet.

Minute punctured wounds in the region of the fetlock, and thorns embedded about the same region and in the metacarpal region, are fertile sources of lameness in hunters.

A very careful examination is always to be made, and a lightning diagnosis should be avoided.

(*To be continued.*)

INTERESTING DISEASED MEAT CASE IN EDINBURGH.

A Battle of Experts.

In Edinburgh City Police Court, on Tuesday, March 12th, Sheriff Orphoot commenced the hearing of evidence in a case of considerable interest to the Veterinary and Medical Professions. The respondent was John Elliot, wholesale butcher, 2 Drumdryan Street, Edinburgh, the charge being that he was the owner of two sirloins of beef, weighing 45 lbs., deposited on the 3rd of January last in the premises in Ponton Street occupied by the Central Meat Market Company, and intended for human food, which meat was diseased, unsound, and unfit for human food, in contravention

of section 43 of the Public Health (Scotland) Act. Mr. M'Lennan, advocate, instructed by Messrs. Dalgleish and Dobbie, W.S., defended. The court was crowded.

The first witness for the prosecution was JAMES HENDERSON, who said he was a Veterinary Surgeon and Assistant Inspector of Markets under the Public Health Act. On Thursday, 3rd January of this year, while in the exercise of his duties in the Central Meat Market, he noticed two sirloins of beef, weighing about 45 lbs. together. He noticed they were roasts from the carcase of a cow. On examining the inside of them he found that the pleura and peritoneum were stripped off. The pleura on the left side was only partially stripped, and the peritoneum was also partially stripped, There was more on the peritoneum than on the pleura, and the diaphragm was stripped altogether. The pleura was sometimes found to be stripped, but the peritoneum ought never to be stripped. His suspicion when he saw the peritoneum stripped was that the stripping had been done to remove tubercular deposit. Sometimes the pleura was stripped for "back-bleeding," but when the peritoneum and pleura are stripped it is an indication, and markedly so, of tuberculosis. The meat composing those two roasts were, in his opinion, diseased and unfit for the food of man, and he seized them accordingly.

Cross-examined by Mr. M'Lennan, witness said his reason for seizing the meat in question was because he considered, from the distribution of the stripping, that the stripping had been covered by tuberculous deposit previously, that the animal had suffered from tuberculosis and peritonitis. It was not the fact that the pleura had been stripped that led him to seize, but the whole *ensemble*. The diaphragm was rough, which was always the case where tuberculous disease existed. That rough appearance was caused by the effusion or irritation of the tuberculous germ. He knew of a stage of tuberculosis called the granular stage, which he judged in the present case by the naked eye. He made no microscopical examination till some days afterwards. He examined a piece of the diaphragm with the microscope. He cut it into small pieces, macerated them, and examined them. He found the tubercle bacillus. He admitted that a very good way to examine meat was by sections, but he made an examination by films. By that process of examination he could find what tissue changes were going on. When partially dressed, animals were hung in the Edinburgh Market by a block and tackle arrangement. He was not aware that the method in Glasgow was, when an animal was killed, to lay it on its right side until it was sectioned. When an animal lay on its side for a considerable time after being killed, there was a risk of what was called "back-bleeding." He based his opinion of the meat upon his naked-eye and microscopical examination.

Dr. SHENNAN, Lecturer on Pathology, said he made a microscopical examination of the sirloins, and found organisms which were undoubtedly tubercle bacilli. He could come to no other conclusion than that the animal had been tuberculous.

Principal DEWAR deponed to examining these sirloins in what was known as the Sanatorium in Edinburgh Slaughter-House on the 11th January. They were undergoing decomposition. The outside of the pleura had been stripped off, the diaphragm and the peritoneum had also been stripped. There were some cases where the pleura was stripped for the purpose of human food, but there was no intelligible reason for stripping

the peritoneum. The meat was such that it would have attracted the attention of an inspector, who on closer observation would have seen that the stripping had taken place. There was what he took to be an inflammatory deposit on the peritoneum. Part of the diaphragm still remained, and on the part attached to the pleura he saw two tuberculous nodules about the size of a split pea. The meat was dark and soft, and from the stripping and the presence of these nodules he believed the animal had been tuberculous to a considerable extent.

Cross-examined.—The kidney had been removed, and the tearing of it away would partly account for the absence of the peritoneum, which had been stripped. The evidence of disease on the right pleura would not necessarily involve evidence of disease on the left pleura also. The fact of the left pleura not having been removed did not suggest to his mind that there might have been some other reason than disease for the stripping of the right pleura. On the contrary, he would have suspected that there had been some reason for removing the right pleura. The conditions which he saw were of such a nature as to convince him that had he been able to see the viscera and other organs before they were removed, he would have formed a much worse judgment than he was able to do in the condition he saw them.

Re-examined by the Public Prosecutor.—The organisms of tuberculosis could not have been produced by mere decomposition.

Principal WILLIAMS, of the New Veterinary College, said he examined the two sirloins on the 11th of January, and he found that they had begun to decompose. On the left side of the pleural surface he found an inflammatory deposit and tubercular nodules. He took a piece of the meat and made a microscopical examination of it. He had no doubt that the meat was tuberculous.

In cross-examination the Principal said he was a better judge in matters such as this than members of the medical profession. He did not remove the nodules which were left there. He believed there would be coagulated lymph if there was inflammatory action. Even assuming that there had been no inflammatory action, his diagnosis would not be wrong. He made no preparation to demonstrate inflammatory lesions. He made his examination for the bacilli of tuberculosis. He made perhaps three or four films. It was impossible to say how many were the organisms. He could not count them. Even if he had subjected the films a little longer than he did to sulphuric acid, he did not think the characteristic red colour would have disappeared.

Dr. WILLIAMSON, Chief Sanitary Inspector for Edinburgh, said he saw these sirloins, which represented parts of the carcase of an old cow, after the seizure. The meat was dark in colour and very soft in consistence, and, on closer examination, he found on the right side an inflammatory effusion, and that the line of lymphatic glands running along the side of the vertebræ showed in some instances evidence of tubercular disease. With regard to the pleura and the peritoneum having been stripped, witness said that the Royal Commission on Tuberculosis gave it as one of their decisions that in all cases in which foreign meat was discovered with the pleura stripped the carcase was to be seized. The Local Government Board had gone still further, and had issued instructions extending the Committee's recommendation to all meat, both foreign and home, and witness now acted upon these instructions. Witness afterwards made a micro-

scopical examination, and found distinct evidence of the presence of tubercle bacilli in the effusion over the pleural and peritoneum side of the diaphragm. In his opinion the meat was in such a highly dangerous condition that the inspector was bound to seize it.

Corroborative evidence was given by Messrs. James M'Phail and John Riddoch, veterinary inspectors, and Mr. Peter Drury, Superintendent of Edinburgh Slaughter-House.

The first witness for the defence was Professor MUIR, Professor of Pathology in the University of Glasgow. On the 17th January last, he deponed, he visited the Edinburgh Slaughter-House, accompanied by Dr. Welsh of the Edinburgh University Pathology Department, for the purpose of inspecting this meat. Dr. Williamson pointed out the carcase and the diaphragm, from which specimens had been cut previously by others. He made a careful examination of the diaphragm, and saw nothing of the nature of tubercle nodules. There were two slightly elevated patches, which were not, however, of the appearance of tuberculous nodules. He took pieces of the diaphragm for microscopical examination, and afterwards prepared a large number of films and sections. With regard to the film preparations, he found on examination a few bacilli which retained the red stain as tubercle bacilli do, but they differed from the ordinary tubercle bacilli in certain minor points, such as size and shape, and witness also noticed that in many parts of the preparation the red colour was still present, or in other words, that it was difficult to remove the red colour from the preparation. He then made other preparations, exposed them to longer action of the acid in the staining process, along with known tubercle bacilli, and found that, while the tubercle bacilli remained perfectly clear, there were no traces of the organisms which in the first preparation appeared like the tubercle bacilli. He had no doubt whatever that from the general appearance, and from the result of the staining, that these organisms were not the tubercle bacilli. In the sections not one of these organisms were found.

Dr. WELSH, Lecturer on Pathology in Edinburgh University and Pathologist to Edinburgh Royal Infirmary, said he visited the Slaughter-House on the 17th January to inspect this meat. His attention was specially directed to a sirloin with some of the diaphragm adhering to it. The under surface of the peritoneum was slightly roughened, and there was a thin, somewhat moist layer on it, but he saw nothing of the description of nodules. Witness prepared films and sections. He attached more importance to sections, and found, in the first place, that this moist layer was entirely composed of bacteria. When he stained this bacteria for tubercle bacilli, none of them retained the red stain, and he did not think they could have been mistaken for tubercle bacilli. In none of the sections did he find bacilli which retained the red stain longer than the other bacteria. In the films he prepared he found no tubercle bacilli, but there were bacilli which showed a superficial resemblance to tubercle bacilli in the fact that they retained the red stain after a short decolorising, but not only did they lose the red stain, but they took on a blue, which no tubercle bacilli could have done.

Cross-examined.—The pleura and the peritoneum were in a perfectly normal condition. The pleura was not all there. The superficial bacteria would separate the organisms of tubercle, but would not conceal them.

The hearing was resumed in the City Police Court on Tuesday, the 26th March, the sitting being wholly occupied by the defence witnesses.

CHARLES M'GUIRE, cattle dealer, said one of the smallest of the six Irish cows he sent to be slaughtered was skinned out on its lying side—the side on which the animal lay when it was slaughtered. It was the scuppen that was skinned out, but only on one side, the remainder being in the usual condition. Under the system of meat inspection in Glasgow, it was impossible for a carcase to be brought into Nelson's stance unless it had been passed by the Glasgow Corporation inspectors, and Elliot was aware of that fact. The price paid by Mr. Elliot for this animal was at 4¼d. per lb.

JAMES MUNRO, meat inspector, Glasgow, said he was on duty at the Glasgow Slaughter-House along with Mr. Ramsay, another inspector, and they examined the animals slaughtered for Mr. M'Guire. All that witness examined were sound and fit for food. To a considerable extent the inspectors in Glasgow formed a check on one another, for after the carcases were removed from the slaughter-house they were examined by an inspector in the dead meat market, so that if anything escaped the vigilance of the inspector at the slaughter-house, it was subjected to a further examination in the meat market. Witness afterwards heard that two sirloins said to have come from Glasgow had been seized by the Edinburgh inspectors, and he accompanied Mr. Trotter to Edinburgh on the 5th January, and examined the right spare rib of the animal in the Central Meat Market in Ponton Street, and the two sirloins in question at the Sanatorium. The meat was in a perfectly sound and healthy condition. The peritoneum was entirely intact on both sides. Witness saw no traces of tuberculosis, although he made a careful examination. He saw nothing of the nature of nodules in any shape or form.

Cross-examined.—He had had no training as a veterinary surgeon, but he had been trained to look for disease in animals by Mr. Trotter. He distinguished between ordinary pleurisy and tuberculous pleurisy by the presence of nodules in the latter case, and knew of no other difference. (Q.) Do you assume when you do not see any nodules that there is no tuberculosis? (A.) Certainly. There was one inspector in the Meat Market, and on the 31st December there would be hundreds of carcases in the market.

Re-examined.—If there were any traces of pleurisy at all, he would send the carcase to Mr. Trotter's department.

MOSES HETHERINGTON, meat salesman, Glasgow, spoke to the practice of stripping the pleura to remove coagulated blood, the result of back-bleeding.

JOHN BROWN, a butcher at the Central Meat Market, Ponton Street, said he cut up the carcase in question, and it thus came under his close observation, and appeared to him to be in a perfectly healthy condition.

ROBERT SMITH, Manager of the Central Meat Market, corroborated.

Mr. GIBSON, Veterinary Surgeon, one of the inspectors employed by the Glasgow Corporation, spoke to examining the sirloins in the Edinburgh Sanatorium on the 4th January. He found no trace of disease, and as far as he could see by the naked eye they were quite fit for human consumption. He made no microscopical examination.

Mr. TROTTER, Chief Veterinary Surgeon to Glasgow Corporation, said he had an inspector in the Dead Meat Market who must see every carcase that came down there. The witness had a large number of cattle slaughtered in Glasgow, amounting to 58,000 in the half-year, a fourth of

that number being cows. He found that the results of his system were pretty universally accepted. He never had challenged before any meat passed by his inspectors except the meat in question. On Friday, the 4th of January, Mr. Elliot, the accused, came to him and alleged that two sirloins passed by witness had been seized in Edinburgh. He then sent Mr. Gibson through to inspect the meat, and on the following day went through himself accompanied by Inspector Munro. He went to the Central Meat Market in Ponton Street, and was shown a spare rib of the right side of the cow in question. He found that it was the spare rib of a well-nourished medium cow, although there was undoubted evidence of coagulated blood, showing conclusively to his mind that over-sticking had taken place. The flesh in that spare rib was sound wholesome flesh, and off an animal in good condition. It was a good cow of medium class. He then went to the Sanatorium, and there examined the right sirloin. He found the right pleura stripped, and the peritoneum free from disease. There was no evidence of disease of any sort. On the left roast the skirt had been cut out, but the peritoneum and the pleura were still there, and showed no evidence of any disease. The kidneys had been removed. He noticed nothing resembling a tubercular nodule. There might be fat excrescences which would be difficult to distinguish from nodules. There was a considerable amount of intermuscular fat on the roasts. The meat seemed to him to have suffered from rough handling. It was dirty, and had evidently been ill-used. The table on which the roasts were lying was dirty. If he kept his diseased meat chamber in the same condition as the Sanatorium in Edinburgh, he would be reported to the sanitary authorities for keeping a nuisance. A carcase left in the Sanatorium for a fortnight would simply be contaminated with any germ that was contained in that place. He was almost certain that it had been contaminated in the interval. It was a scientific fact that tubercle bacilli were very readily transmitted through dust. It was the most prolific source of tuberculosis. He observed that there were open panels in the doors of the Sanatorium, so that the wind could blow through it to a certain extent.

Cross-examined.—(Q.) If anything of the nature of tubercle bacilli had been communicated to these sirloins while they were in the slaughter-house, could you understand why these could not have been found in the films of the two Glasgow gentlemen who examined microscopically? (A.) That could be accounted for in this way—the true tubercle bacilli might be so very few. (Q.) Have you put it forward as a principle that tubercular organisms can be carried by the atmosphere? (A.) In all likelihood, with so much diseased meat in the proximity. The organisms, however, would be on the surface. (Q.) Would you not have expected them to be discovered by the microscope? (A.) No, not necessarily; because they might be so few and far apart that they would be very difficult to discover, (Q.) Do you say positively that it is impossible for any man of skill to tell with the microscope the presence of two nodules half the size of a split pea? (A.) I say that it is simply impossible for a man to say whether two nodules half the size of a split pea are tuberculous or not [!!!! Ed. V. J.]

This concluded the evidence, and counsel were afterwards heard, Mr. M'Lennan for the defence declining to adopt a suggestion by the Sheriff that he should accept a statutory finding that the respondent "did not know, and could not with reasonable care have known," the condition of the meat. He submitted he had proved that the meat was not diseased at all.

Sheriff ORPHOOT delivered judgment on April 2nd. The respondent, he said, was charged with having been guilty of an offence within the meaning of section 43 of the Public Health (Scotland) Act, 1897, in so far that he was, upon the 3rd January last, the person to whom belonged two sirloins of beef, which were deposited in the premises in Ponton Street occupied by the Central Meat Market Company for the purpose of sale and intended for the food of man, and which were diseased, unsound, and unfit for the food of man, and which were seized by one of the veterinary surgeons approved by the Local Authority, and afterwards condemned and ordered to be destroyed by the Sheriff. The defence stated to that charge was two-fold. In the first place it was said that the sirloins were not diseased, unsound, and unfit for the food of man; and in the second place, that even if they were in that state, the respondent "did not know, and could not with reasonable care have known," that the sirloins were in that condition. These defences raised two objections. The first was—Were the sirloins proved to have been diseased, unsound, and unfit for the food of man? In support of his contention that the sirloins were in that state, the prosecutor relied upon the presence of two nodules which were said to be tuberculous, and which were found upon the pleural side of the diaphragm, and he contended that he had established that these nodules were tuberculous. The defence denied that entirely. They denied that the nodules were there in the first place, and they also denied that, if they were there, they were tuberculous. Now, upon that point of the case the evidence was very contradictory indeed, but in the view that the Sheriff took of another point in the case he did not find himself called upon to decide which of the two sets of witnesses were right in reference to the nodules, and therefore, without expressing any opinion, he passed to the second point upon which the prosecutor relied in contending that the meat was unsound—that the peritoneum was stripped to conceal the evidence of tuberculosis. The Sheriff did not think that the prosecutor relied very much upon the stripping of the pleura. It was stripped, but it seemed to be fairly enough established that that was done to avoid "back-bleeding." As regards the stripping of the peritoneum, the defence upon that was that only so much of the peritoneum was removed as it was necessary to remove in order to get out the kidney. The question was as to which of these two contentions was established by the evidence. Now there again the evidence was extremely contradictory, and somewhat equally balanced, and, as with reference to the former point, the Sheriff did not find it necessary to express an opinion upon it. The third point upon which the prosecutor rested his contention was that the result of the microscopical examination was to show the meat contained tubercle bacilli. With that point he proposed to deal. The evidence upon which the prosecutor maintained that that was established consisted (1) of Mr. Henderson. He was a veterinary surgeon, although perhaps not of such skill as were some of the other witnesses for the prosecution, although he was a man of considerable experience. He examined the diaphragm under the microscope, and he found tubercle bacilli. The second witness was Dr. Shennan, who examined the sirloins upon the 11th January, and examining by films and sections, chiefly films, found tubercle bacilli. The third witness was Principal Williams, a gentleman in the front rank of his profession, and of great experience. He examined the diaphragm upon the 11th January, and took portions of the diaphragm for examina-

tion, and with sections and films he found tubercle bacilli. The fourth witness was Dr. Williamson, another witness of experience and position, and, making his examination of the diaphragm by means of sections and films, he found tubercle bacilli. The fifth witness was Mr. M'Phail, a veterinary surgeon of large experience, and taking scrapings of the diaphragm and examining by films, he found tubercle bacilli; and the last witness, Mr. Riddoch, on the day of seizure, took from the peritoneum some scrapings, and found that these contained tubercle bacilli. Now that was the body of evidence upon which the prosecutor relied as establishing his contention, and all these witnesses agreed in arriving at that result. With reference to the last witness, it was important to observe that what he took from the surface of the peritoneum was taken on the day of seizure, and he found tubercle bacilli then. If he was right, then that disposed of the theory of contamination, for it was not contended that there was contamination occurring on the day of seizure. Now, the evidence of the defence led to meet this body of evidence consisted, in the first place, of Professor Muir, who took sections of the diaphragm, and examined by both films and sections. The date of his examination was not very clearly spoken to, but it was certainly later, and a considerable time after the seizure, and that perhaps was a circumstance which was unfortunate as regards the value of the investigations he made. But the result at which he arrived was that the bacilli which he found he considered were not tuberculous bacilli; they retained the red stain for a short time, but they differed from the bacilli of tubercle in size and shape, and he considered that these bacilli were not tuberculous. Now, Professor Muir, in speaking of the nodules, used language somewhat different, and although the Sheriff did not attach much importance to the contrast, it was still a circumstanee that a contrast existed. In speaking of the nodules he did not say he *considered* these nodules were not tuberculous; he said at once that they were not tuberculous for reasons which he gave. To the Sheriff's mind, however, the circumstance which rather weakened the value of Professor Muir's evidence was the fact that his examination was made later. The next witness upon which the defence principally relied was Dr. Welsh. He took sections of the diaphragm on the 11th January, and he arrived at the conclusion that the bacilli which he found were not tuberculous, chiefly because the red stain, the distinguishing feature of tuberculous bacilli, faded on a long exposure to dilute sulphuric acid, while the bacilli of tubercle did not so fade. Now, the question was whether that was an entirely sufficient ground for saying that the bacilli under examination were not tuberculous. To the Sheriff's mind, in order to warrant such a conclusion, the bacilli called the bacilli of tubercle would require to have been subjected to similar conditions as the bacilli under observation. Among these conditions was one mentioned by Dr. Welsh, viz., that the bacilli under examination would undoubtedly be crowded out by the bacteria of decomposition. Now the known tuberculous bacilli with which they were compared were not subject to a similar process, and if they were not in point of fact subjected to similar surroundings as the bacilli under examination, it did not, to the Sheriff's mind, appear to be a fair test to compare these two bacilli and to be a conclusive result to arrive at that the bacilli under examination were not the bacilli of tubercle. These were the only two witnesses, he thought, upon which the defence relied to combat the evidence of the prosecution upon this point,

as to whether there were or not tuberculous bacilli in this meat, and the conclusion at which the Sheriff arrived was that the evidence for the defence had not succeeded in shaking the evidence for the prosecution upon this point, and the result was that he thought it established that this meat did contain tuberculous bacilli. But, while arriving at that result, he was quite clear that the respondent had fully established the main point of his defence, and had proved that he "did not know, and could not with reasonable care have known," that the condition of the meat was tuberculous, and was entitled to a finding of that character. As regards the question of expenses, Mr. R. Macaulay Smith, the Public Prosecutor, said he made no motion. Mr. M'Lennan, advocate, who defended, applied for costs, and the Sheriff, in giving his decision on the point, said the prosecutor had been successful upon the first of the two questions involved, as he (the Sheriff) had held that the meat was found to be unsound; while upon the second point the respondent had been successful, and upon the broad ground that there had been divided success here, he found neither side entitled to expenses.

ENZOOTIC ABORTION.[1]

BY JOHN STEELE, M.R.C.V.S., WIGTON.

GENTLEMEN—I thank you for the honour you have conferred upon me in electing me your President for the ensuing year, and at the same time I am sure that I may look forward to similar support and good feeling that has been extended to former occupants of this chair. I can assure you that it will be my utmost endeavour during this year of my office to make it as much a success as possible. This chair, gentlemen, has been filled since I came amongst you by men of different schools, by men who have not only received their early tuition in the different colleges, but by at least one man who entered the profession a good number of years before the middle of the last century, and who, I am pleased to think, is still amongst us.

I am too sensible of my inability to speak in adequate terms of the sound advice in professional matters that I have received from many of you, and I trust that during this year of my office you shall not be backward in bringing forward any subject of interest such as every practitioner meets in his daily work. We cannot shut our eyes to the fact that in every department of professional life the preparation which was accepted years ago goes only a very short way in meeting the requirements of the present day. In former years the healing art was the popular object of sympathy; it is now preventive medicine which commends itself to the man of science. If you look back on these last fifteen years you will find that you were busily engaged with many diseases that you now seldom see, the reason being that you not only found the material to combat these complaints, but that you have educated your clients and attendants in the ways and means to disarm the cause of all such troubles. But, gentlemen, if we have derived means of getting rid of many such diseases, you will find others creep into our midst which formerly must have been in abey-

[1] Presidential Address delivered at a Meeting of the Border Counties Veterinary Medical Society on Friday, 19th April 1901.

ance, and the evil that formerly existed is now replaced by another, which leaves us an abundant field to carry on further research.

It is not my intention to give you a long address, nor yet do I claim to bring before you anything new, but what I wish to make a few remarks upon is a disease which is very prevalent in this country, and which I am sure could, in a great measure, be prevented, viz., Enzootic Abortion. Enzootic abortion, that is to say, abortion usually affecting a very large proportion of the pregnant animals in a given area at about the same time—is one of the worst diseases with which farmers and stockowners in general have to contend, and I feel inclined to say even worse than tuberculosis; at any rate, the loss and disappointment associated with this disease are often extreme, and the difficulty of arresting its progress has led, in many instances, to the partial abandonment of breeding, and the consequent loss caused by it yearly must be tremendous. As it would be very difficult to calculate the exact loss resulting from this disease, no one could give anything like an exact estimate, and if such could be given, I have no doubt that it would be both startling and alarming news to many.

As it is a disease upon which most will agree that curative treatment is of no avail, that is to say, that when once an animal begins to show the usual signs of aborting, nothing will prevent her from doing so. My chief object, therefore, in bringing this disease to your notice is to try if something more cannot be done to stay the ravages of this dire disease.

Abortion seems to have existed for a very long time, and we find evidence of its existence in some of the very ancient writings. A very early reference is found in the dialogue between Jacob and Laban, in which the former is made to say, "All the twenty years that I have been with thee neither the ewes nor the she-goats have cast their young." Towards the latter part of the eighteenth century we find recorded instances of various species of domesticated animals being simultaneously the subjects of enzootic abortion. In this country, about the beginning of the last century, it was said that it was seldom seen in the lower animals, though it was frequent in the human race; though, about 1837, abortion spread through dairies, studs, and flocks. In 1886 abortion in cows had become so prevalent and serious that a question was asked in the House of Commons as to the advisability of bringing it under the Contagious Diseases (Animals) Act. During this period it produced great comment on the Continent, and in the seventies many important investigations were made in Denmark; and in recent years the Royal Agricultural Society of England formed a committee of inquiry into abortion in cattle, with a view to preventing or checking it. Still, I am sorry to say it is, like the poor, always with us, and like continuing to be, unless some more stringent measures are taken for its prevention, and to which I shall allude towards the end of my paper. It is no doubt a disease largely due to domestication and influenced by artificial conditions, as it is seldom, if ever, seen amongst wild animals or animals on the Welsh hills or the Highlands of Scotland. It is, however, not only in cows that enzootic abortion is serious, but also in mares, and I should like to draw your attention to the prevalence of this disease among mares. I believe abortion in mares is on the increase, and that some of our most valuable studs have been badly affected of late, and the attendant loss most severe. I have met personally more cases this season than almost in any three or four previous years put together, and I have read that in other counties the disease has spread

to an alarming extent in some of the largest studs, losing a large percentage of their foals. It is also pretty common amongst ewes, and there are few practitioners in sheep-breeding districts who have not been consulted with regard to the occurrence of this disease in ewes.

Now before we can make any valuable suggestions with regard to the prevention of this disease, we must first agree as to the cause, and if we could once determine the exact cause, then it would be an easy matter to deal with the prevention.

On considering the etiology or cause of enzootic abortion, I shall briefly refer to the physiological action exerted on the womb through certain nerve-centres in the spinal cord.

We must remember that in the spinal cord of the female there is a certain nerve-centre which, when excited, brings about the contraction of the uterus and often expulsion of its contents. This centre may be excited through impressions made within the uterus, or in the uterus from without, and also by a stimulus from the brain due to certain mental states. For example, after normal gestation is complete, this action is called forth as the result of the fœtus becoming independent and acting like a foreign body on account of the altered relation of the fœtus to the womb, which acts as the stimulus. Normal parturition therefore occurs not as the result of any mental excitement, nor as a consequence of any impression from the outside, but from changes which are gradual within the womb.

But while change of relation of the fœtus and dam is allowed to be the common cause of the expulsion of the uterine contents, it is somewhat strange why so many are inclined to think enzootic abortion is brought about by sympathy, or, better, reflex action. By that is meant the effect on the uterus through the special senses of sight, smell, hearing, &c. The possibility of the excitement of the uterus by mental emotion is not denied, but why the lower animals should have been credited with so sensitive a nature is difficult to understand, for by all the lower animals almost every variety of smell, &c. is experienced without exhibiting any sign of mental emotion; and if this should be the cause of abortion, then we should expect to find it occurring more frequently in the highly sensitive mare or ewe than in the cow, which is not the case. Admitting enzootic abortion is contagious, and not due to any mental state, we now come to an important question, viz., may a case of sporadic or accidental abortion not lead to the enzootic form, and so become a centre of contagion. This will be answered in the affirmative by many, believing that the germ which produces it is developed as a product of the diseased conditions of the placental membranes, &c. of the cow that has aborted. This I am not inclined to believe until we can prove that a harmless microbe or germ may become under certain conditions the cause of a specific or contagious disease. We might just as well say that the micrococcus found in an ordinary abscess could cause the abscess of strangles. I believe myself that enzootic abortion is due to a specific virus which gains access to the genital passages of pregnant animals, passes on to the uterus, and there sets up certain changes, which in time bring about expulsion of the fœtus, and that it is found affecting cows of all breeds and under all conditions, indoors and out, and in well as in badly ventilated byres, and at all seasons of the year, and it may occur at any period during gestation. And I have noticed, like other specific diseases, it does die out, if no fresh animals are brought

into the herd, generally in about three years; and this may be accounted for by the acquired immunity of the cows themselves, or by attenuation of the powers of the specific virus. I can point out certain large dairies where they have never had this disease, due I believe to the fact that they never purchased or brought fresh cows into the herd, but reared their own, nor allowed the bull to serve cows coming from neighbouring farms, and this I consider an important fact when we come to deal with the prevention.

I therefore think that before we can get rid of this disease it must be scheduled under the Contagious Diseases (Animals) Act, and certain restrictions be placed on owners of all affected herds. With regard to preventing the spread of the disease in a herd in which it has once appeared, I think there is no better method than that advised by Professor Nocard and several others, who advise thorough antiseptic precautions being taken, such as the daily sponging of the tail, perinæum, &c. with some antiseptic solution; also the thorough disinfection of byres and isolation of all animals which have aborted. I have advised this treatment in a great number of cases, and I have found it always a success.

But so long as farmers and others are allowed to take and expose for sale in a public auction cows that have aborted, we may never expect to get rid of this disease.

Now, gentlemen, I conclude by hoping we will have a good discussion as to the best means of checking the ravages of this disease.

REDWATER.[1]

BY ROBERT YOUNG, M.R.C.V.S.

MR. PRESIDENT AND GENTLEMEN—I must first thank you as a young member for the honour in asking me to read a paper before you. My reasons for choosing this subject are, that (1) we appear to have very little literature on the subject, and that which I have read certainly does not coincide with my experience of the disease; (2) The disease appears to vary with the locality. I trust that by discussion I may learn the views of other practitioners on the subject.

Definition.—Redwater, Blackwater, Moor-ill, Hæmo-albuminaria, Hæmaturia, Hæmatinuria, is a disease of cattle characterised by colouration of the urine, varying from a light red, claret colour to a dark brown (almost resembling stout), associated with premonitory diarrhœa, followed by apparent constipation and prostration.

Pathology.—I am afraid this portion of my paper is very incomplete, and I am quite certain there are many present who will not agree with me. It is generally considered to be hæmo-albuminuria, and the red colour of the urine to be due to the escape of hæmatin, consequent on the disintegration of the red blood corpuscles, caused by an impoverished condition of the blood. I am of opinion, however, that in most cases it is hæmaturia, or blood in the urine, which no doubt is albuminous. My chief reasons for thinking so are—

(1.) I have seen cases where blood clots were actually passed per

[1] Read before the recent meeting of the Western Counties Veterinary Medical Association at Truro.

vaginam. No doubt we have all seen blood passed per rectum in the early stage of some redwater cases, and I ask, why not per vaginam?

(2.) The beneficial effect of turpentine and perchloride of iron.

(3.) The post-mortem appearances seem identical with those of internal hæmorrhage.

(4.) I do not consider hæmo-albuminuria, if neglected, would be so rapidly fatal, and the clinical appearances of an animal in the last stage of the disease are also identical with those of internal hæmorrhage.

Etiology.—I am firmly of opinion that this disease is due to a germ, for we see it on certain farms where, if new cattle are brought, they are sure to contract the disease in a bad form, while those reared on the same land have a mild attack, which appears to render them immune. It is endemic, for I know of several farms where they constantly get it, while the immediate neighbours have never seen a case on their land. As to it being a disease of the poor man's cow, that certainly is not my experience. On the contrary, we get it on the richest and best-drained pastures. I have never noticed that turnips or roots in excess have been followed by an attack. Some months ago I had a case in a fat steer, who had been tied up for some weeks and was having no roots. How did he get it? I notice that I generally get cases after heavy showers, and clients naturally think it is due to a chill, but I would rather think that moisture increases the vitality of the germ. Over-driving from fairs, markets, &c., has been considered a cause, but I am of opinion that those cases are not true redwater cases, but similar to azoturia in the horse. I recently saw a cow which had been driven from Launceston to Michell Fair and then to Grampound Road, a distance of 50 miles. Her water was noticed to be black long before she got to her destination, and she had had very little to eat on the journey. When one considers the excessive muscular exertion in an animal who probably had been in high keep prior to the sale, and never walked 50 miles in her life, it is easy to imagine the rapid tissue change, and consequent elimination of dark urine. These cases are serious, and I have particularly noticed the rapid muscular atrophy.

Symptoms.—It is very rarely we, or even the owner, see the early symptoms, and I find this particularly to be the case with steers which are not under such close observation as heifers and milking cows. Occasionally a client comes in who knows there is something wrong with the cow, but has not seen her water. I do not consider there is any diagnostic symptom but the colour of the urine, although there are others which are decidedly suspicious. In the early stages there may or may not be febrile excitement, but it is rarely we see cases in time to detect it. On the contrary, the internal temperature is generally a degree or two below normal, and the lower it is the more critical the case. The extremities are generally cold, and the pulse very quick. On auscultating the heart, it will be found to be beating very quickly, sometimes palpitating. The visible mucous membranes are often yellow, and always paler than natural, the pallor depending on the length of time the animal has been ill. At first there is diarrhœa, the fæces being expelled with some force, as through a quill, followed by obstinate constipation and straining. The breathing is accelerated, and in some cases the bases of the lungs are slightly congested. I am of opinion that there is not such a thing as parturient redwater, and take it that such cases are merely coincidences, but in the cow which has recently calved there is a peculiar puckered appearance of the vagina, and the urine is often voided in jerks, similarly to a sow.

The urine varies from a light red to almost black, is thick to commence with, and has a white froth on touching the ground. In some districts it is light red to begin with, and remains so for some time; in others it gradually gets darker, while in some cases I feel confident it is black to commence with. I do not think I need trouble you with the analysis of urine, which is not easy to commit accurately to memory.

There may be tenderness on pressure over the loins, but this is by no means a constant symptom. In a recent case I had where blood clots were passed per vaginam, the cow would scarcely let me approach her, and the slightest touch on the loins would send her to the ground. The secretion of milk is diminished, and in some cases has a reddish tinge. Occasionally the stomach is deranged, evinced by grunting and grinding of teeth.

Prognosis.—If taken in time the prognosis is certainly favourable. Provided the bowels are well opened at the commencement and the animal continues to feed there is little danger. Many cases require nothing but a big dose of salts, and it is through this that a man may gain or lose his reputation for treating redwater. I have often heard it said Mr. So-and-So was a clever man. One of his drenches would be sure to put a bullock right. Should your client have had a case or two like this, and the next you happen to treat for him is an obstinate one, he will probably think you know very little about the job. In nearly every village there is some authority on redwater, who often commences treatment by constipating his patient with a bottle of cheap port wine, varied with flour gruel, and finishes him by attempting purging with big doses of salts. It is needless to say the prognosis of such cases is decidedly unfavourable.

In my experience the disease is more obstinate and dangerous in fat cattle than in those in store condition. Fat is only condition in the butcher's point of view, and no doubt causes a sluggish condition of the excretory organs and consequent danger. I have often noticed that should the disease attack a bad doer, I mean an animal who has not been thriving for some time, and by careful nursing you pull him through, that he will commence to thrive at once and in a few weeks be like another animal.

I consider it a very unfavourable symptom for the urine to change very suddenly from black to clear, and I would rather it returned to normal gradually. Out of a record of the last 63 consecutive cases I have had five deaths; one in a fat cow, two in high condition, and two (one in a steer) very poor. In each instance the case had been badly treated or neglected. In one of the cows the urine changed from black to clear in two or three hours, and she died from exhaustion.

Treatment.—Having satisfied myself that I have a case of redwater to deal with by examining the urine, I give a big dose of mag. sulph. It is not always a cow or steer will make water when you want them to, and one may not have a female catheter at hand. You may try rubbing the vagina or perinæum with a bunch of hay, which is often successful. If this does not succeed, and there is a pond close by, I drive the animal into it so the water covers its fetlocks, when it will soon stale. I have never known this to fail. I clothe my patients and give them anything they will eat in abundance except hay, and plenty of cold water to drink; oaten sheaves, oats, and bran in preference. Should the water be no thinner, and there is any straining, in twelve hours I repeat the salts, which will often effect a cure. It is a mistake to keep drenching with gruel when the appetite is good, often putting an animal off its food. However, if the patient is eating

nothing, not even cabbage or ivy leaves, I give ol. tereb. ℥ii., liq. ferri, perchlor. fort., ol. eucalypt. *aa.* ℥ii., liq. potassæ ℥i., ol. lini. ad ℥iv. every four hours in two quarts of linseed gruel made with raw milk and three raw eggs. In these cases, should there be straining and no fæces passed, I consider a second dose of salts dangerous. I backrake them and generally find the mere fact of putting the arm in the rectum stimulates the peristaltic action of the bowels. The constipation is due to paralysis of the bowels, and not to impaction, as the fæces are usually soft, and often one's arm is covered with dark blood from the congested state of the mucous membrane. This I find is always the case in fat cattle. Should clysters not have the desired effect, I give ol. lini. Ojss.

I have never found any symptoms of irritation to the kidneys or strangury from the repeated use of the turpentine, and it is very rarely the urine is not clear in four doses. Should it not be so, I find æth. nit. ℥ii., pot. chlor. ℥ss., nux vom. ℥ii. in gruel as before will generally clear it in one or two doses.

I have mentioned the use of oil of eucalyptus, which I happened to use one day in place of ol. cassiæ to scent a redwater mixture. It is excreted almost entirely by the kidneys, as I found by the pungent odour in a cow-house. Containing terpene, as it does, and being a good antiseptic, recommended internally in malarial diseases, I consider it a valuable drug. In cases of great prostration I have had excellent results from Macadam's liquid horse malt mixed with the gruel. Where there is tenderness over the loins the application of hot rugs is beneficial, and I find this especially applies to overdriving cases, which on no account should be purged with salts. I find a large dose of oil followed by malt extract and linseed gruel with æth. nit. and pot. chlor. every four hours the best treatment. In a recent case of this kind the bowels acted freely, but the fæces were of a light clay colour, due no doubt to liver derangement, which soon recovered with repeated doses of acid nitro. hydrochlor. dil. With regard to preventive treatment I have advised a liberal dressing of salt, but have not been long enough in my district to know the result.

Post-mortem.—Unfortunately, except in one case, I have been unable to make a post-mortem. I examined the liver particularly, and found it a peculiar pale yellow colour, and not congested with blood as usually described; otherwise there was every appearance of death from hæmorrhage. I had hoped to have given you the results of chemical tests for blood in the urine, but since being asked to read this paper I have been unable to procure any fresh samples uncontaminated with drugs.

I am afraid my paper is not a very scientific one, and perhaps some will think it based on wrong pathology. I don't think it matters much to us financially if the disease be hæmaturia or hæmo-albuminaria, for I find that farmers think more of successful practical results than pathological theory. If it will lead to a good discussion, or even abuse, I shall be amply repaid for the little trouble I have taken.

OUR PROFESSION: A RETROSPECT AND FORECAST.[1]

BY GEORGE EDWARD KING, M.R.C.V.S.

GENTLEMEN—One of the first duties that devolves upon a new President on his taking the chair at the annual meeting is the infliction of an address upon his fellow-members, containing the usual stereotyped platitudes and familiar homilies.

Whether the address is of any practical value or is merely a sacrifice to professional convention, it at any rate affords the President the opportunity of expressing his appreciation of the action of the Society in placing him in the position of honour. And I desire, gentlemen, to tender you my sincere thanks for the kindness and good feeling you have shown me, and as your President I will endeavour to keep a faithful watch over the interests of the Society, and spare no effort to make my year of office a successful and interesting one. An inaugural address I believe is not open to debate, and consequently is sometimes made the medium of expressing grievances, airing fads, or dosing an audience with professional politics. Fortunately for you I have no grievances or special ideas, so you will be spared any interesting ordeal. I am what Lord Rosebery recently facetiously described himself to be, "a mere dull rural person, a looker on," so I propose offering you a short commentary review of the principal events which have taken place during the past year, and to make one or two references to what we are anticipating during the coming twelve months.

Last October another veterinary school was added to the four already existing, and Ireland has now the honour and privilege of educating her own veterinary surgeons. I trust that the new College will be successful.

Death has, I regret to say, removed from us during the last twelve months one of our most useful and prominent members. The late Sir Henry Simpson was taken off in the very zenith of a successful professional and social career. We shall all miss his genial presence, and the Society will lose, I believe, one of its founders and early presidents.

The matriculation examination, the subject upon which the election of 1896 was fought with so much stubbornness, and which at that time we thought was settled, has cropped up again and occupied a considerable amount of time at the Council meetings. I am not prepared to offer any opinion upon the subtle arguments advanced by the rival sections. I think the entrance examinations should be an equal test at all the schools, but whether the Scotch schools have any real grievance I think is doubtful. Probably all these bickerings and contentions would have been avoided had we in 1896 struck out a line of our own and not slavishly followed the medical profession. I think we might with advantage fix a standard of education of our own and stick to it; originality is evidently at a premium in the Council. The veterinary profession is sufficiently robust to stand alone, and the time has now arrived when we should be able to throw off the medical yoke. We cannot afford to make any retrograde steps. While every branch of learning and science is advancing, we must advance too, or be left behind in the race. The portals of the profession should be jealously guarded, for we must remember the better the recruit the more the rank and file will advance, and the more proficient the whole body becomes the more the public will appreciate us.

[1] Read at a meeting of the Royal Counties Veterinary Medical Association, 29th March 1901.

The young lad who has been a pupil for twelve or eighteen months with a good general practitioner before entering his College course has a decided advantage over the man who enters College direct from school. He gets a good idea of the routine of a practice, learns how to ride and drive, sees animals in health and disease, gets a knowledge how to handle patients and clients, and become handy in administering medicines, all very important points in his subsequent career. A client often forms an opinion of a man, whether there is any grit in him, by the way he approaches him, how he rides or drives into his yard, or handles his patient, and I hold these practical details are a very important part of the veterinary surgeon's education. Personally, I much prefer as locum or assistant a gentleman who has served his pupilage, and I know clients are of the same opinion. A man makes none the worse student for having seen practice; I think he makes the better. Compulsory pupilage would be, I think, a benefit to our young men, and the profession generally.

Turning from home to the topic which has most engaged our attention during the past twelve months, the war in South Africa,—the doings of all branches of the service have been watched with critical eyes, and I think there is every reason for the civilian portion of the profession to feel proud of the way their military *confrères* have performed their duties; they have come out of the ordeal with flying colours. Considering the Veterinary Department was undermanned—a point to which the attention of the authorities had been repeatedly called long before the war broke out, and owing to the scarcity of its numbers when the stress of war came, it had to fall back upon volunteers—gentlemen who were patriotic enough to give up good positions, and in many cases leave large practices, but who of course had received no training in military methods. Bearing in mind the extreme difficulties under which their duties were performed, and the outbreak of contagious diseases among the horses that were landed at the Cape, it would not have been surprising if the Press, which all through the campaign has been captiously critical, had had some adverse comments upon our men. But although doctors were condemned, generals cashiered, and many other officers blamed for neglect of duty, I have not heard or read of anything but praise for the veterinary officer. There have been serious allegations respecting the remounts and the shipments of horses, but neither of these are I believe under the control or direction of the veterinary officers; it might perhaps be an advantage to the Army and a corresponding relief to the pocket of the taxpayer if they were under veterinary supervision. Now that reform is the order of the day, it is to be hoped that the claims of the Veterinary Department will not be overlooked, but receive the attention they have so long merited. The grievances the Department has laboured under are admitted by all right-minded persons, and now, in view of the valuable services it has rendered, the Government are under an additional obligation to remove them. But reform moves with laggard steps. It has often appeared to me that were the heads of several of the Government Departments characters in a Gilbertian play, their condition could not be more paradoxical. A Minister is appointed to an office to direct its affairs, not because he has any special knowledge of its duties; whatever his other qualifications may be, his *rôle* is to answer as ambiguously as possible questions in Parliament—replies that are notoriously often suggestions of

what is false or suppressions of what is true, or both, and to worry and interfere with his subordinates—often men who are experts, and have had a life-long experience of their work. Thus we have a Minister of Agriculture who has no special knowledge of the farm or of the diseases of animals, with a military deputy to assist him. The Army and the Navy are managed in the same way. One Government goes, another takes its place, these Ministers who by mere contact have become affected with some of the traditions of their respective offices, have their places shuffled. They have got to know a little of the work where they have been—they are consequently sent to muddle and worry elsewhere. Supposing a large business house managed its different departments on these lines, what would be the result? Can we wonder at inefficiency?

During the coming summer there is a most important Congress to be held in London on the subject of Tuberculosis, with a very comprehensive programme. It is flattering to find that the veterinary profession has a section allotted to it. Science owes a considerable debt to veterinary workers for the light they have been able to throw upon the disease, and we are grateful to find our labours are acknowledged and appreciated. Probably the number of human deaths arising from animal contamination, *i.e.*, direct contagion and the consumption of tuberculous milk and flesh, is small, so are the deaths arising from rabies and glanders; but the risk, which is a far greater one than of these two other diseases, must not be ignored. The Congress will have the useful effect of directing public attention to the disease, and the means of preventing it, both in human beings and animals, for, apart from the risks to human life, the loss sustained by agriculturists is sufficient to warrant the Government taking over the control of the disease, and it is to be hoped that, as one of the results of the Congress, the disease will be scheduled under the Contagious Diseases (Animals) Acts. But the field of veterinary research is still a wide one. There is still plenty of work for careful scientific investigation, plenty of diseases of which we are still in the dark as to their true pathology, and consequently treat empirically—the loss sustained by dairymen and farmers from the disease known as parturient apoplexy alone must amount to a considerable amount annually.

Let us hope the day is not far off when a scheme for a post-graduate course, which has been promulgated on more than one occasion, will take some practical shape. This would afford the opportunity for trained scientific research into some of the diseases of which our knowledge is almost as primitive as was that of our forefathers.

The meeting closed with votes of thanks, carried by acclamation, to the President for his admirable address and courteous conduct in the chair, and to the gentlemen who had brought forward specimens of interest.

THE LATE COLONEL GEORGE FLEMING AND THE VETERINARY PROFESSION.

THE death of Colonel Fleming recalls stirring times in the Veterinary Profession some forty years ago, when this country was invaded by Cattle Plague and other dire diseases, which more than decimated our flocks and herds, and when Government and a large portion of the Press seemed to think the members of our profession had not yet cut their wisdom teeth,

and knew almost nothing scientifically about such diseases, that we had only reached the experimental stage of our history, and were incapable of advising or treating such diseases, as they seemed to imagine that as they were new to them they were also new to us. To look back on that and intervening times, and to the part the late Colonel Fleming took in seeking to establish our profession on something like a proper basis, is an education in itself, and we propose in this and in a future article to show how much we have been indebted to him for our present professional position.

As an example of Dr. Fleming's courage and pride in the defence of his profession, we publish two letters of his to the *Standard*, in 1865, when the dreaded Rinderpest invaded this country.

SHEEP AND CATTLE DISEASE.

"SIR—The public will, I am sure, thank you for the opportunity you have given it of perusing the admirable memoir on the Cattle Plague, drawn up by the late and justly-lamented M. Renault, whose ability and remarkable talent for observation Professor Bouley, one of his sincere friends and colleagues, did not think it necessary to mention in the letter he enclosed accompanying the report. In this instance those who long doubted the consistency of the *Times* will find another proof of how the public weal is marred by the suppression, distortion, or ridiculing of facts which tend to jar with the interests or opinions put forth by that journal.

"We are visited by a fearful plague which, next to attacking ourselves, leaves us in the most helpless state. Our cattle are dying by the hundred daily; no cure for the disease, when it has once gained a footing amongst the herds, is known; our flocks are threatened with decimation by contact with their bovine companions; the malady is virulently contagious, far more so than any of the disorders which afflict humanity. The facts of its fearful contagious character stare us in the face when reading the medical history of Europe for the last 200 years, and when tracing it now from farm to farm, from cow-shed to byre. Its deadly nature is every day striking terror into the bovine-loving earl or the humble milk-vendor, and reliable information regarding its history and character, and the best means of insuring ourselves against its ravages, is thankfully and eagerly accepted; and yet what does the *Times* do? Why, it derides the teaching of science founded on experience; it stoops to double-dealing in asking for a memoir from the French Minister of Agriculture when that memoir was lying in its waste-paper basket; it permits the letters of the ignorant, would-be amateur, quack, cowkeeper, or butcher, who know no more of the disease than the bullocks they are anxious to save, or of the nature of the suffering species beyond where they meet with it on the dinner-table, the foul cow-shed, or the shambles to glare in its columns, while it suppresses those of the best authorities, who are honoured with the confidence of their nation, and who have spent their lives in the study of a profession which devotes itself to such subjects, and for the very simple reason that their opinions do not happen to agree with the ground taken up by the *Times*. From the first the *Times* has ignored, if it knew, the history of the cattle plague; it has been grotesquely earnest in appealing to any or everybody for a cure, while it sarcastically or angrily opposed prevention. While quietly admitting its ignorance of the malady, it lauds the stethoscope in the hands of the doctors, farmers, or amateurs, as an instrument whereby the disease can or might be detected by auscultation of the lungs before it showed

itself in any other organs. Happy *Times*, to rely so lovingly and confidingly on the ease with which auscultation can be practised through the thick, shaggy skin and the wide ribs of a restless ox, when the most delicate ear and years of practice are needed for the student of human diseases, and where a dead silence and particular position must be maintained in the sick-chamber. What an advance in science will our farmers have made when, in the midst of a lowing herd, neat wooden tube in hand, ox taught to expose his chest in various ways, he will be able to prognosticate the commencement of a disease by listening to the respiratory murmur of the lungs, when that disease, after death, is found located in the stomach and intestines.

"The fact is that only the letters of those who favour its ignorance in accounting for the appearance of this bovine pest, and treat it to a cure, are admitted to its columns; no matter who the writers may be, they are certain of a prominent place; while those who have the misfortune to know the malady well, and who venture to remonstrate with it for erroneous and mischievous teaching, are consigned to that convenient receptacle—the waste-paper basket. An ignoramus writing from the obscure Isle of Sheppy was more welcome than the memoir of M. Renault, and a Fellow of the Royal College of Physicians, who would decry a sister profession and vaunt a powerless remedy, was the subject for large type. In its unmerited language towards the veterinary profession it has been guided by unpardonable presumption, unconscious or unwilling to acknowledge that veterinary surgeons at once recognised the malady in the crowded markets and dirty cow-sheds of London, long after they had carefully studied it on the Continent, while the measures they recommended would have saved the country from a dire pestilence; and their prevention, rather than cure, would have saved many an honest man and many a smiling homestead from utter ruin. But, thanks to the *Times*, there is no lack of opportunity for that detailed study, that minute description, and the production of that specific remedy which it raves about, but which it forgets has already—aye, nearly a century ago—been carefully pursued by the first physicians of the age, and with no better result than bringing us to the conclusion that prevention is more than a thousand times better than cure.

"Thanking you for the insertion of the French veterinarian's memoir in your columns, the rejection of which by your contemporary will rather open the eyes of the public.—I beg to remain, Sir, yours very obediently,

"G. FLEMING, *3rd Hussars.*

"Aldershot, Oct. 4, 1865."

THE *TIMES* AND THE CATTLE PLAGUE.

"SIR—To your sense of fairness and public duty I would fain appeal in asking for space enough to refer once more to the inconsistency and most prejudicial conduct of the *Times* in its treatment of a grave and national question. I allude to the nature and history of the cattle plague, regarding which your contemporary has assumed so much, and presumed so much more, that any one who knew no better would give it credit for being an authority on the subject. Such, however, in this instance, as in many more, cannot be allowed, for if any proof were needed to demonstrate its oftentimes utterly fallacious and injurious teachings, it would be the history of this disease as it has been dealt with by the above paper.

"When the malady was first observed in the metropolis, in the middle of June, and its nature at once recognised and reported to the Government by the scientific gentlemen who have to do with such matters, the *Times* saw fit to doubt the correctness of the report, and by the position it has assumed it cannot for a moment be doubted that to its scepticism and dogmatism the country may hold itself indebted for very much of the loss—the very great loss—it has and will yet sustain. Thoroughly ignorant of the character of the plague it professed to know so much about—teaching that its origin was atmospherical and not due to contagion, that segregation of the healthy from the diseased was therefore unnecessary, and that the destruction of a few to save the lives of thousands and tens of thousands from infection was barbarous; forgetting, in short, to read the history of the disease, or to inform itself of its nature, the *Times* has much to answer for in leading unfortunate stock proprietors astray until now, too late to save many of them from black ruin. Nothing can be more humiliating, one would think, or more bitter to the spirit of a respectable journal than to have to confess, after nearly four months' treatment of this serious malady, and decrying science until one nearly doubted the existence of any science at all, that it has been in error, and to know that its pseudo-science has been placarded, and is now exposed over the world. A collection of the articles it has devoted to the subject would form a fitting accompaniment to sundry other collections made at different times, and which, but for the irreparable mischief they have done, would afford nothing but amusement at the amount of presumption and ignorance needed to handle some scientific or political hobbies. Yet one must confess to a feeling of relief in reading to-day's lucubration, to discover that at length there is some hope of the malady being checked, for it has suddenly been hammered into the head of that wise writer on the bovine pestilence that the disease is really the dreadful rinderpest, and what is more, that it is contagious; and he therefore recommends what the people have been doing by the advice of less dogmatic but more consistent and trustworthy authorities for the last two months. Out of the chaos of confusion he is pleased to announce this painful change in his views; but we have only to read his own articles to see that the confusion is of his own making, that this confusion was foisted on the public with that air of authority which would make the whole affair a joke, were it not almost a national disaster, and that people who spoke or wrote the truth were treated to *Times* Billingsgate or afforded a place in the waste-paper basket.

"Now, sir, is this right, or is it even approaching to justice, either to the public or to the reputation of journalism, to write, to dogmatise, and to slang, to deride science and the teaching of experience, well knowing the grave responsibility incurred by misleading the public—we would almost hope unwittingly—and causing confusion and doubt by its pretended knowledge when opposed to wise measures? What a pity it did not inform the scientific world it was about to begin its studies in rinderpest. A small library could easily have been raised to teach it what it is now beginning—painfully for the public interest—to learn.

"It might even now refer with great advantage to a few of the authors who would find a place in that library, such as Lancisi, Ramazzini, Sauvages, Vic d'Azyr, Guersent, Dupuy, or our own Layard: and for the facts of the innocuousness of the flesh of oxen affected with this disease, which is now grandly announced as if for the first time, the memoirs of Grognier,

Gohier, Huzard, Payen, Parent, Duchatelet, and others too numerous to mention in your limited space, might be faintly hinted at.

" In the midst of our distress and loss let us hope that other countries may not look upon the *Times* as the exponent of science in Britain, but that the articles devoted to it in this instance are written from a point of view that would become a monk of the middle ages, a sceptic of truth in this, or an insufficient amateur who cared not for the public weal so long as his own opinion pleased him. It will probably be worth while noting the change that takes place in that opinion as events roll on, but the injury done cannot be mended, and we have only to lament that ignorance and sensation writing should be so long tolerated, and truth so long suppressed or perverted. A journal accustomed to eat humble pie in so many shapes will not be much affected by having to eat one furnished from the rinderpest.—I am, Sir, most obediently yours,

" Aldershot, Oct. 18, 1865. G. FLEMING, *3rd Hussars.*"

And in which he shows the great harm that was done in this country by the promulgation of errors.

In 1866 he received the £50 prize from the Royal Society for Prevention of Cruelty to Animals for his essay on " Vivisection."

In 1868 Dr. Fleming pointed out that a disease among horses and mules in Abyssinia was similar to the " horse sickness " so well known in Cape Colony, and we quote a portion of this letter :—

THE MORTALITY AMONG THE HORSES AND MULES IN ABYSSINIA.

" SIR—The great interest which has been excited in the public mind by the appearance of a deadly epizooty among the horses and mules of the Abyssinian expeditionary force, and the mystery that apparently hangs about it, as to its nature, causes, and prevention, induces me to ask your permission for the insertion of the following remarks, as they may tend in some degree, if not entirely, to dissipate the anxiety that prevails, and point to a mode of averting the inconvenience and loss attending the presence of such a malady at this particular juncture.

" So far from its being a novelty, there are few equine disorders, besides those peculiar to horses in this country, which have received a greater amount of attention, or whose effects have been more marked than this one. It is nothing more or less than the well-known ' horse sickness ' of the Cape colonist, the ' Paard-ziekte ' of the Dutch Boer. From the earliest times it has ravaged the farmers' teams and droves in that quarter of South Africa, and has been noticed and commented upon by nearly every African traveller. Those of your readers who desire further information concerning it I would refer to Anderssen's and Livingstone's writings more particularly. Sir W. Baker, in his recent work on the Albert N'yanza, describes it as attacking his animals on his progress towards the sources of the Nile. The symptoms enumerated by these travellers entirely agree with those given to us by correspondents now attached to the force in Abyssinia.

" One of the most recent travellers, Dr. Scherzer, in his narrative of the voyage of the Austrian frigate ' Novara,' affords us so very concise a description of it and its effects that I venture to transcribe it. He says—' During our residence in the Cape Colony (in 1857) severe depression existed among the agricultural inhabitants of the western and eastern districts, in consequence of an epidemic which, within two years, had carried off 64,850

horses (draught horses, mares, and foals) of the value of £525,000 sterling. Many landowners in consequence entirely gave up rearing horses, and turned their attention almost exclusively to the breeding of sheep. The visitations of this malady are by no means of late introduction, but hitherto they had made their appearance at such long intervals that but little attention was paid to them, and people regarded their return without much alarm. This disease of the horse, usually epidemic in Cape Colony, assumed every twenty years, owing to some inexplicable causes, an epidemic character, and on those occasions extended over an extensive area, as happened with extraordinary regularity in the years 1780, 1801, 1819, 1839, and 1854. Hitherto no further precaution was taken than, so soon as the disease appeared, to drive the horses from the grass pastures to their stables or covered sheds, and there supply them with fodder, the night dew being considered a main cause of the complaint.

"'A resident in Stellenbosch, indeed, maintained that the dew which was deposited during the continuance of the disease tasted quite bitter, and was of an unusual brownish tinge. Singular to say, not the slightest symptoms of illness manifested themselves in the swine, dogs, and birds of prey which devoured the carcases of horses that died of the disease, while the consumption, whether boiled or roasted, of mutton which was ever so slightly tainted with the mere germ of this malady, never failed to produce the most mischievous consequences on the human species. Considering the importance of the subject to a land-holding colony, it could hardly fail that numerous individuals should devote themselves to elucidating the causes of the devastating epidemic; but it must ever remain a striking and significant fact, illustrative of the high standard of cultivation in Cape Colony, that within a very few years 112 different authors published treatises respecting this complaint among the horses. The result of these numerous researches was, that the malady is epidemic, but not contagious; that horses driven into the stable before sunset, and not permitted to go out to pasture, are, as a rule, exempted from attack; that those horses which are kept at night in open pounds, or in places where there are heaps of dung, take the disease in a milder form than if suffered to roam at large day and night; lastly, that horses for which no covered shelter can be provided may, with great advantage, be sent to hilly localities and dry runs of land. The practical remedy which was most resorted to consisted in immediate and prolonged bleeding, pushed to actual exhaustion of the animal, in the first stage of the disease.'

"GEO. FLEMING, M.R.C.V.S.,
Royal Engineers."

About this period Mr. Fleming frequently gave evidence in cases of cruelty, and was severely criticised by the daily and other papers.

Punch took the matter up, and had a pathetic letter from "A Tiny Terrier":—

"A CASE FOR PROPER HEARING.

"Please, dear *Toby*, stand up prettily upon your hind legs, and beg your master, *Mr. Punch*, to order people not to crop the ears of little dogs like you and me, who cannot hear without them. Perhaps they do not know that cruelty like this is contrary to law; but the other day two men—or rather brutes, as I should call them—were pulled up at a police court, and would have been sent to prison if they had not paid a fine, for cropping a

poor puppy. They said that cropping was a "custom," and really did not hurt (I wonder how they would have liked their own ears cropped, for an experiment, and their lawyer tried to make out that because Sir Edwin Landseer had painted dogs with cropped years, he proved that it was customary and himself even approved of it. But Sir Edwin bravely gave his evidence in favour of us dogs, and as he painted my great-grandfather I am proud of his opinion.

"As dogs can only bark, and yelp, and howl, and growl, and whine, and whimper (a language which poor human creatures don't yet understand), neither you nor I, nor any of our friends, were put into the witness-box to say if cropping hurt us. But there was this medical evidence brought forward of the fact—

'Mr. Fleming, Veterinary Surgeon of the Royal Engineers, stated that the operation would be an act of cruelty to the dog, and cause it extreme pain. He explained that dogs of that breed had drooping ears, which, if cut in the way which was presented by the little terrier in Court, left the inner parts unprotected, and in many cases produced deafness. He attributed the cutting of dogs' ears to a depraved taste, and denied that it was the usual custom.'

"Dear *Toby*, please tell *Mr. Punch* that having half our ears cut off does hurt us very badly; and as it is against the law, I hope he'll put a stop to it, and thus win the lasting gratitude of you and me, and thousands like us who have had the bad luck to be born. A TINY TERRIER."

In 1869 Mr. Fleming published his work on "Horse Shoes and Horse Shoeing, their Origin, History, Uses, and Abuses," which was dedicated by permission to H.R.H. Prince Arthur, K.G., and which was most favourably commented upon by the Press, not only of this country, but that of the Continent.

The British Quarterly Review of January 1870 said of it:—

"For want of a nail the shoe was lost, and for the want of the shoe the horse was lost.' So says the proverb; and if we were to supplement it with, 'For want of a horse the knight was lost, and for the want of the knight the battle was lost,' the dependence of clause on clause could hardly be called irrational or extravagant. If any one should think it to be so, he has but to read Mr. Fleming's able and exhaustive treatise on 'Horse-Shoeing' to find how vast and important to humanity is the superstructure which is built up upon that piece of bent iron, whose shape and name are as familiar to us as household words. . . . Thus it will be seen that Mr. Fleming's subject is one of no ordinary importance, for it is at once the culminating point of much that is interesting, and the starting-point from which we may proceed to almost every matter of human interest. Mr. Fleming enters upon his task with some rarely combined qualifications. He is not only acquainted with classical literature; he is also a judicious critic. He is an observant archæologist, a scientific anatomist, and a traveller, and he has the experience which his position as Veterinary Surgeon in the Royal Engineers ensures. No wonder, then, that a subject which a casual thought might deem narrow and commonplace, should be presented by such a man in seven hundred pages of great attractiveness. The writing is throughout clear. . . . Space fails us even to glance at the

numerous details of the progress of the art in the Middle Ages, the days of *chivalry*, of kingly and knightly shoe-smiths, of *mareschals* and *ecuyers;* but we trust our readers will see how fascinating is the subject of farriery. . . . We feel sure that the merits of the work will secure it many readers in a nation where all young men profess to be judges of horses, and like to be thought 'horsey'; and many of these will derive from its perusal a knowledge which will make their affectation of equestrian experience somewhat less absurd than it too often is. The practical suggestions concerning shoeing are most important."

In 1872 we find Mr. Fleming contributing a long letter to the *Times*, in respect to "Foot and Mouth Disease," which at that time was causing very serious loss to the country, and we quote a portion of that letter to show that he was a long way ahead of his day.

THE FOOT AND MOUTH DISEASE.

"The principal feature in a scheme for the prevention of contagious diseases among animals must be the appointment of district inspectors, who, being thoroughly trained veterinary surgeons, entirely under Government direction, and not practising generally, would devote their whole time and attention to this and other sanitary matters in which the public welfare is largely concerned, no less than the private interests of stockowners.

"Of the many services these Government officials might render, I may specify the inspection of animal food, of slaughter-houses, a general supervision of the movement of animals into and out of their districts, the drawing up of reports on various subjects connected with the health of animals, and the duty of enforcing all sanitary measures relating to the preservation of health and prevention of disease. Those inspectors stationed at ports of disembarkation would have for their special duty the scrutiny of the foreign animals imported, and the control of quarantine should that be established.

"A tithe of the loss now sustained would maintain an efficient organisation which would relieve us from the annoyance, panic, and injury now imposed upon an important and most essential branch of industry, and protect animals from disease and suffering. At present it is difficult to say who the inspector of a district may be. If a veterinary surgeon, then he is in general practice, and as likely to be an active agent in diffusing contagious diseases as in preventing them; besides, his interests as a private practitioner and Government official must and do clash. He frequently cannot perform the functions of the latter without the risk of offending and losing the patronage of his agricultural employers, and it is perfectly impossible that he can attend to both interests satisfactorily. For it must not be forgotten that many people who own or deal in stock do not always see their advantage in the abolition of contagion.

"In Belgium and other Continental countries, which possess highly competent veterinarians, the most proficient of these are employed as I have suggested, and with the greatest advantage. As a proof of this, I need only refer to Belgium. Within the last seven years that country has been repeatedly invaded by that most deadly of all animal scourges, the 'cattle plague,' and yet, owing to the excellent organisation ready to meet such emergencies, and the intelligent zeal of the Government veterinary surgeons, the loss sustained has been most trifling. In 1865-6 we lost more through one invasion of 'cattle plague' than would probably have

maintained a sanitary service for some twenty years, and which would have preserved us from that and the subsequent ravages of other plagues.

"The machinery for the prevention of animal pestilence in this country, though very expensive and hampering, is clumsy, disjointed, and inefficient; and no better evidence of this could be afforded than in the wide-spread contagion from which our flocks and herds are now suffering, and in the terribly high price of animal food. Sooner or later we must have an efficient sanitary service for the lower animals. The sooner it is instituted the sooner we shall be relieved from the present unsatisfactory state of affairs.—I have the honour to be Sir, your most obedient servant,

"GEORGE FLEMING,

"CHATHAM. Veterinary Surgeon, Royal Engineers."

In 1871 "Animal Plagues: their History, Nature, and Prevention," was produced by Mr. Fleming, and was very generally reviewed, most of the leading periodicals of that time giving notices of it. Later in the same year there was great controversy as to whether or not there was such a disease as dumb rabies, which affected a large number of hounds and other dogs in the country. Shortly after this Mr. Fleming brought out a work on "Rabies and Hydrophobia," and in 1874 he delivered a public lecture on the subject before a large audience at the Pomona Gardens, Manchester.

In 1875 Mr. Fleming commenced as editor of the VETERINARY JOURNAL, and of it the *Sportsman* of July 31st of that year says.—

"A new monthly veterinary journal, edited by Mr. George Fleming, F.R.G.S., veterinary surgeon, Royal Engineers, will no doubt be hailed with satisfaction, and perused by the profession and horsemen generally with pleasure and profit. The original articles for this—the first number—are ably written and well selected. At pages 1 to 5 will be found a most instructive and sensible article on the 'Increase and Prevention of Glanders.' As regards the spread of this dreadful disease and its prevalence in this country at the present time, the writer, Mr. W. Hunting, M.R.C.V.S., makes the following most sensational statement:—

'Without dwelling upon the detailed pathology of the disease, I may be permitted to assert that glanders and farcy are merely forms of the same disease, and equally dangerous as sources of contagion. Also, that of every hundred cases, ninety-nine are unmistakeably due to contagion, and probably the hundredth is traceable to the same cause, if we only could follow the hidden mode of communication. Adopting this view of the nature and cause of glanders, we may logically conclude that if we can destroy the existing virus, not only in the affected animals, but in the stables and on the other surfaces where it may have been deposited, we shall practically remove the disease from this country. Even granting, for the sake of argument, that a fractional percentage of cases of glanders may arise spontaneously, sanitary measures based upon a simple contagious origin will be found as thorough and effective as any human endeavours can hope to be.

'That some active steps are necessary is shown by the fact that the disease is steadily increasing throughout the country. So common is the disease in London, that it is almost impossible to visit a horse-slaughtering establishment without seeing one or more of its victims. And so reckless and dishonest are many horseowners, that cases of the disease have been sent into and sold at nearly every horse auction in the metropolis. It is

not very long since a cavalry regiment was infected; and it is stated that the disease existed among the horses engaged in at least one of our autumn manœuvres. Glandered horses are to be found in cab and omnibus yards, and not a few contractors keep the disease constantly in their stables. Not only are glandered horses worked in the streets, but they may be placed with others on the cab-rank, or permitted to use the public watering troughs. So well is this known, and its danger appreciated, that many cab-drivers are prohibited, under penalty of dismissal, from taking their horses to the drinking troughs. Worse than this, however, is the practice of killing the marked cases of glanders in a stable, and selling the apparently healthy by public auction. This step is only taken when milder means have failed to stop an outbreak; in other words, when the owner feels certain that many of his apparently healthy horses are infected, and will in time develop the symptoms. The symptoms are developed in many of these animals by time, and then they are unsuspected and stabled with other healthy horses.'

The remedy proposed by the writer is for the Privy Council to appoint inspectors at a trifling cost as compared to what he estimates as the present annual loss in glandered horses. If we even grant Mr. Hunting has drawn too gloomy a picture concerning the ravages of the disease, it is certainly time that some energetic steps were taken to prevent its extension.

"Another instructive paper on 'Spasmodic Roaring,' is contributed by Mr. T. D. Broad, M.R.C.V.S., Bath, and this will also be perused with a more than ordinary degree of interest by owners of all kinds of horse stock. At page 7 Mr. Broad says:—

'In January 1872, a gentleman of this neighbourhood sold a four-year-old off chestnut gelding, believing it to be sound, the horse having been hunted up to the time of sale. On the day of purchase it was taken to Brighton; being very wet, the groom thought the horse had taken cold, as he found, when exercising it a few days after arrival, that it made a noise. It was then shown to Mr. Mannington, veterinary surgeon, who gave an opinion that the horse was a "roarer," but that the sound was of an unusual and spasmodic character. Some correspondence took place, and I was sent to Brighton to examine the horse. After doing so, I quite corroborated Mr. Mannington's opinion, as the "roaring" varied so much in the course of a trial as sometimes to be scarcely perceptible, while at other times it was excessive. After my return to Bath the matter was settled by my client refunding a part of the purchase-money. The horse was then placed under the care and treatment of Mr. Mannington, and I ascertained from him that it was put into a loose box littered with sawdust; that laxative medicine was given, a long seton inserted in the submaxillary space, a blister applied from ear to ear, and repeated as often as possible; that, subsequently, he gave it small doses of calomel and opium daily until the gums became reddened, when another laxative was administered. After a few days the calomel and opium were repeated, the seton being allowed to remain in the neck for five weeks. The horse was then exercised, and it was found that it still made a little noise. By a modification of the same course of treatment, and liberal feeding, with exercise, the "roaring" entirely ceased. Some little time after leaving Mr. Mannington's hospital the owner brought the horse to Bath, when I had an opportunity of riding and galloping it up hill for a mile, but without being able to detect the

slightest noise. In 1873, however, it had a second attack of the same spasmodic affection, and so severely that the noise could be heard sometimes when the horse was only trotting slowly. But in the course of a few weeks it became nearly or quite well, without medical treatment, and was subsequently sent to London and sold for sixty pounds.'

"There are many other equal interesting subjects worthy of notice in the VETERINARY JOURNAL, but we have given sufficient to show the kind of instructive and interesting matter of which the serial is made up, and we have no doubt that it will enjoy a widely extended circulation."

(*To be continued.*)

Clinical Paper.

BRAIN LESION.

BY R. RUTHERFORD, F.R.C.V.S., EDINBURGH.

THE following is the last occurring one of three cases which I have had comparatively recently, and the most prominent symptoms of which were those of brain lesion. The case has some features of interest which I desire to place on record, if you think it of sufficient importance, and can find room for it in the JOURNAL.

Early on the morning of Monday, April 1st, I was requested to attend at the stables of Messrs. ———, coalmasters in this city. The patient was a bay cart horse which, on being harnessed for work and taken down the gangway of the stables, was noticed to be awkward and stiff in his movements. I found him in a loose box, standing quietly, and to all appearance with very little wrong with him. On beginning to handle him, however, I found him strangely stiff, as if fixed to the ground. He could back, but it was exceedingly difficult to get him to move forward. His respirations, pulse, and temperature about normal, but he had only partly eaten his early breakfast.

I ordered all his shoes off, his feet to be placed in poultices, and gave him a purgative draught, and left strict orders that he was to have no food till I saw him again next morning, by which time I anticipated there would be a change one way or the other.

9 *a.m. April* 2.—The report this morning was that he had been just as I had left him previous morning. I found, however, that he could not now be induced to move forwards ; no amount of pushing could make him do it, and he did not even go backwards well.

I was anxious to see a little more of him, and tried to force him to move about, when, quite suddenly, he threw his head up, and then round to his near side in a convulsion, which lasted for ten minutes or so. Gradually the fit passed off, and he appeared to be all right again. His bowels had not been opened, but, knowing that he had got enough to ensure their action, I contented myself by ordering only occasional enemas and cold-water cloths to his head, and feet poultices to be discontinued.

At six o'clock same day I received a message that he had had another fit, and was now down, and unable to get up again. I found him as said to be, lying perfectly unconscious, all sensation and power to move his

limbs completely lost, lips retracted, tongue hanging out, breathing very shallow, and with a hard but not much otherwise altered pulse.

He was bled freely till the pulse began to alter, bowels emptied, and placed in a comfortable position, and strict orders given to keep a watch over him, so as to keep him lying comfortably; the cold water was to be kept applied to his head, and he was to be turned over after twelve hours.

9 *a.m. April* 3.—He was lying pretty much as I left him previous night, the only change on him being that he had some use of his hind legs, and had made partial efforts to rise on them. He was still unconscious, but not quite so complete as on the previous night; his tongue was back in its place, and with patience he could swallow a little water out of a bottle. In my presence he made one of his efforts to rise, and looked so like breaking his neck that I hobbled him.

The enemas and cold water to head were ordered to be continued, and he was ordered, and got with the greatest benefit, half-ounce doses of chloral and bromide of potass every four or five hours. This, after the second dose, induced sleep, and he ceased his efforts to rise. He was ordered to be attended to closely, and to be turned over occasionally, and tried with a little water.

9 *a.m. April* 4.—Consciousness returning, and drinks himself with a little encouragement. His bowels are moving freely, but they require the stimulus of enemas. Treatment, &c. continued.

To-day I reported to his owners that he was in a condition analogous to a person who had had an apoplectic shock, that there was brain lesion, probably rupture of a blood-vessel, and that we must wait and see the result. I was not able to say he would regain his feet; and if he did, that he would so far recover as to be of service; we would see. In reply, the horse was placed unreservedly in my hands, to act as I thought best about him,—give him his chance, or destroy him.

April 5th.—As yesterday—and the same treatment, &c. was continued.

April 6th.—To-day I find him getting restless, that the hobbles are annoying him, and although padded, that they are rubbing his heels. He is more conscious, can lift his head, drink, and nibble a little mash. He is dunging and passing urine freely, but is beginning to show bad and many bed sores.

I removed the hobbles, and gave orders to keep him dry and comfortable as possible, and to have the chloride and bromide potass. every six hours.

April 7th, 12 *o'clock.*—Although the hobbles have been off since yesterday, he has made no attempt to rise. His bed-sores are serious, and he is not looking very encouraging. With some trouble I got him off his side and lying comfortably on his breast, helped of course by a little propping. He is drinking freely of water, gruel, and thin mash.

The foreman and men think the case hopeless, and I can see would like him destroyed. I leave orders, however, for him to have the closest attention, to be kept dry and comfortable, and to be encouraged to drink and eat a little.

At eight o'clock this evening the stableman came to my house with the agreeable information that he was up—on his feet, and he thought quite able to stand.

April 8th, 9 *a.m.*—I find he has been standing quietly all night, but he is an object with bed sores. He is quite unable to hold his head up, with the result that it is enormously swollen.

Lest they should be required, slinging apparatus was put up, and a platform fixed up in front pretty high up for his head to rest upon. He is eating and drinking quite nicely. The cold water is to be continuously applied to his head, and bowels to be assisted with occasional enemas. The odour from his mouth is rather sour, so is to have soda hyp. sulph. in ounce doses in his water twice daily.

April 9th.—Great improvement; beginning to move about, and he now looks quite a hopeful case. The swelling of the head has almost gone, his pulse is normal, and appetite good.

From this date on to the 24th, the date when I have put these notes together, he has made steady improvement. To-day (the 24th) he can walk quite freely, and there is no paralysis of any part—partial or otherwise.

Two very large bed sores are marked by great destruction of tissue, but I am satisfied they will do well.

Whether he will have another attack remains to be seen. Both of my other cases *did*. One died at the second attack, and the other I finally destroyed on account of partial hemiplegia and occasional fits of violence.

Extracts.

THE ARMY MEDICAL SERVICE AND THE PRESS.

THE condition of the Army Medical Service is at present exciting a considerable amount of interest if we may judge from the numerous articles on the subject which have recently appeared in various quarters. A military contemporary pertinently points out that while Mr. Brodrick will probably hold office for the next five years, some of his proposed army reforms can hardly be completed under that time, but that the needs of the medical service are so pressing that they at all events cannot await solution for so long a time. We fully agree with this view, but at the same time hope the War Office will act with due deliberation, on the advice of those who are fully in touch both with the service and the medical profession. It would be disastrous if hasty or ill-conceived measures, miscalled reforms, disgusted the existing officers, or further alienated the medical profession. We have already referred to the fear that has been excited by Mr. Brodrick's allusions in a recent speech to the military titles of medical officers, and we take this opportunity of repeating that such retrograde action would be fatal to any scheme of reform. Another contemporary points out that the tremendous strain of the war and cessation of foreign reliefs, coupled with the necessary stoppage of voluntary retirements during its continuance, is likely to lead to complications. Voluntary retirement must be allowed or resumed at the termination of the war, and unless the conditions, especially of foreign service, are ameliorated, there is likely to be a large exodus of officers entitled to pension. With a big outflow at the top, and no inflow at the bottom, the very existence of the service would be threatened. The existing and prospective dangers to the service thus largely result from an undermanned establishment—unequal for peace duties, much more for war. But undermanning is the symptom merely of deeper disease; the effect as well as the cause of evils. It now appears to be generally recognised both within and without the corps that the pay of

the junior ranks, both at home and in India, in which country these ranks spend much of their service, is insufficient. Undermanning makes the Medical Service at once "wearing and wasteful"; wearing, in that the officers are worn out by heavy duties and deficient leave; wasteful, in that continued hustling from station to station, and change to change depletes their pockets. Another writer avers that the talk of "good doctors" for the army so often heard in official mouths, must be insincere, because there is no effort to keep or make them "good" by affording leave for professional study. Such leave has been strongly recommended by successive Commissions for the past forty years, including those of Lord Herbert (1858), Lord Morley, and Lord Camperdown; and the Royal Commission on South African Hospitals has again pointed out the necessity. Of course all leave, including special study leave, is next to impossible in an establishment cut to the very quick to save money. We cannot but hope that these and other outspoken criticisms in the daily and weekly press will convince the Secretary of State of the necessity of giving consideration to the question from all points of view. This may best be done by the early appointment of the committee of experts recommended by the Royal Commission.

(*British Medical Journal*, 20th April 1901.)

SOME OBSERVATIONS ON VELD SORE.

BY W. H. HARLAND, M.R.C.S., L.R.C.P., MEDICAL OFFICER TO THE 17TH LANCERS, FIELD FORCE, SOUTH AFRICA.

By the term "veld sore" should be described a cutaneous lesion distinct from the so-called veld sore following some injury or abrasion of the skin, which has become dirty and infected, and assumes somewhat the same character as the lesion I am about to describe. Such cases, however, form a large proportion of the diseases to be treated by the medical officers of a regiment continually on the trek.

I have personally been lately the subject of two attacks of veld sores, and thus have had excellent opportunities of observing closely their clinical history. The veld sore is generally first noticed as a small papule, about the size of a large pin's head; the presence of the papule, which rapidly increases in size, is often preceded by a slight amount of itching or smarting at the site of the lesion. The papule is filled with clear, yellowish, serous fluid, which gradually in the course of a day or two becomes turbid; the skin covering the papule is very thin, and easily broken. The papule usually increases in size if not broken, or if it is not covered by some protective material.

The usual characters, when seen by the surgeon for treatment, are a somewhat painful, dirty-looking sore, the size varying from that of a threepenny bit (1·6 cm.) to a five shilling piece (3·8 cm.), covered with a dirty scab, exuding serum and pus freely. The sores are generally multiple, and their position almost invariably on the extensor aspect of the hands and fingers. If the papule is incised before it reaches the state above described the base is seen to be pale, the edges dirty, purulent looking, and generally appear to be exuding sero-pus. Almost invariably accompanying the sore in the form which is brought for treatment—that is, the dirty-looking

variety—is a certain amount of lymphangitis, and the epitrochlear and axillary glands are tender and enlarged. Constitutional symptoms, as elevation of temperature, headache, constipation, are often present. Occasionally the patient presents himself for treatment with an enormous flat pustule, in some cases completely covering the back of the hand, and extending upwards under the skin of the fore-arm.

The treatment of these sores is simple. Incisions are made into the papule or pustule if necessary, and in most cases the frequent application of boric or carbolic fomentations, with rest of the affected limb, together with the administration of a mild aperient, usually causes the sore to lose its painful character, gives it a healthy appearance, and removes the attendant adeno-lymphangitis and constitutional symptoms. The after-application of a simple dressing of boric ointment ensures complete healing; the healing process is generally slow, but this is often due to the early enforced use of the limb when on the march or when fighting. A feature of the lesion is the scarring which ensues, the scar remaining smooth and bluish, and very obvious for some considerable time after healing.

Veld sores occur generally in otherwise perfectly healthy men who live under the best conditions, are well supplied with good food, a good amount of ripe fruit, and live the healthiest of open-air lives. I have noticed their frequency in mounted troops; my experience is that they are rare in infantry soldiers, the so-called veld sores seen in them, often in base hospitals, being infected sores due to injuries or parasites, or in debilitated subjects. The form of veld sores which I have described is not found, or very rarely, in men who are inhabitants of this country; the Colonial troops are practically immune, as are also the Boers.

Any sore following a cutaneous injury or abrasion, and becoming infected, is liable to be wrongfully called a veld sore. Possibly continual exposure to a very fierce sun and to a hot wind might cause the blisters in the first place, but the greater frequency of their existence in mounted men and men who are continually in contact with horses, as compared with infantry—their hands being exposed to an equal extent to the sun and wind—is against this. Another possible cause which has been suggested is the bite of the insect known as the tick, which infests the veld; but were this so the foot-soldier would be more subject to the lesion than the horse-soldier, which is not the case. The most probable cause, in my opinion, is the sting of large brown horse-flies, which, especially at the present time (February), occur in large numbers, and frequently settle for a moment on the unprotected back of the hand or fingers. The cases of veld sore at the present time are very numerous in proportion, and there has been a great increase in the numbers of this brown horse-fly. Unfortunately, being continually on the trek with a flying column, I have had no opportunity of making a microscopical or bacteriological examination of the fluid from the sores.

(*British Medical Journal*, April 20th, 1901.)

TETANUS ANTITOXIN.

Jinnosuke Tsuzuki (*Arch. Internat. de Pharm. et de Thérap.*, vol. viii., fasc. 1 and 2, 1901) has studied the conditions necessary for successful treatment of tetanus by antitoxin. The best results are obtained with those

animals which are most susceptible to the tetanus toxin. Thus a guinea-pig, which is very susceptible to Behring's toxin, is more easily saved than a rabbit, which is less susceptible, because in the first case the minimum fatal dose of toxin is much less than in the second, and consequently requires less antitoxin to neutralise it. The correctness of this explanation is shown by the fact that a rabbit poisoned with Tizzoni's toxin, which is not more dangerous to mice than to rabbits, is just as easily saved by antitoxin as is a mouse. When tetanic symptoms have once appeared, the possibility of cure depends on several factors: (1) The original dose of toxin injected must not be more than twice or possibly three times the minimum fatal dose. If the dose be larger life may be prolonged, but never saved; (2) antitoxin must be injected within twenty-four hours of the injection of toxin. If the treatment is begun later, success is doubtful in the case of mice and guinea-pigs, even if the dose of toxin has but little exceeded the minimum fatal dose. For larger animals, in which there is an incubation period of several days after a single minimum fatal dose of toxin, there is more chance of cure with delayed treatment; (3) if the toxin be injected intracerebrally antitoxin always fails, probably because the poison becomes at once fixed in the susceptible cerebral cells; (4) the direct strength of a tetanus toxin is measured by the bodyweight in grams of an animal which is killed with certainty by 1 gram of the toxin. The indirect strength of a toxin is its antitoxin-neutralising power. Some toxins, although possessing comparatively little direct toxicity, have a very high indirect activity; these require a good number of antitoxin units for neutralisation, and give a less chance of cure than many toxins of much greater direct activity. With these modified toxins there is often a long incubation period of forty hours or more between the injection of the minimum fatal dose of toxins and the appearance of symptoms. If treatment is delayed until symptoms appear the chance of cure is less with these toxins than with those with a shorter incubation period of twelve or sixteen hours. Therefore, in successful antitoxin experiments, a toxin with a short incubation period should be employed. (5) Tizzoni's antitoxin is $6\frac{2}{3}$ times less powerful than Behring's. (6) The action of antitoxin is uninfluenced by its solution in distilled water, normal saline solution, or blood serum. (7) If some indifferent fluid be injected hypodermically, together with or immediately after the injection of the toxin, the resulting disease runs a milder course than in animals in which no injections of indifferent fluid have been made. If such injections be made in a part of the body remote from the position in which the toxin was injected, or some time after the injection of toxin, no effect is produced. (8) The action of antitoxin is much more powerful if injected either at the site of the introduction of the toxin or in a part peripheral to it. (9) At least one antitoxin unit (=0.01 gram of Behring's tetanus antitoxin No. 60) should be injected for every kilogram of body weight of the animal, and not later than six hours after the onset of symptoms of tetanus. The most important facts which may be applied to clinical treatment are: (1) The antitoxin should be injected as early as possible; (2) the greatest number of antitoxin units available should be employed; (3) the antitoxin should be injected at the site of the injury so as to act locally on the infected tissues; (4) the less the dose of toxins absorbed the greater the chance of cure by antitoxin.

PLEURISY IN THE HORSE—CURE BY MEANS OF THORACENTESIS AND INJECTIONS OF SALT AND WATER.

In a paper read before the Société Centrale M. Alney stated that he had tried with success the above means, as recommended by M. Brocherion, the injections being made (7 per 1000) in the jugular vein. His first case was a saddle-horse, a four-year-old gelding, which was sent to him on 18th January 1900 as being dull and dejected, and suffering from loss of appetite. The thermometer showed 103·4° F.; there were 30 respirations and 60 pulsations per minute; auscultation indicated slight weakening of the respiratory murmur on the lower part of the left lung. Suspecting pneumonia, he ordered the application of a mustard blister and the daily administration of 150 grammes of alcohol. During the four following days the condition of the patient did not change much; temperature varied from 102·2° to 104°. On the 22nd a second mustard blister was applied, and a litre of salt and water injected. On the 23rd the general symptoms grew worse; temperature 105·2°, respiration 50, pulse 72: dulness and absence of respiratory murmur in the lower third of the chest, but no creaking sound and no blowing in the tubes. The animal was bled to the extent of 3 litres, and M. Alney administered 150 grammes of alcohol and 3 grammes of digitalis powder, and injected a litre of water as before. On 24th, temperature 103·3°, respiration 40, pulse 70. On 25th, there was a change, dulness on both sides of the chest at same height, heaving of the flanks; double pleurisy, temperature 100·4°, respiration 24, pulse 68. On the 26th he performed thoracentesis on the right side, and brought out 3 litres of pinkish sero-fibrinous liquid, the density of which was 1·016. Of this liquid 250 cubic centimetres placed in a graduated eprouvette gave a deposit of 4 cubic centimetres, formed of fibrine, of red globules, and of mono- and polynuclear white globules. Three litres of water injected, and 3 gr. of digitalis administered. In the evening, temperature 101·6°, respiration 15, pulse 50. On the 27th, respiration 22, pulse 45. On 28th, thoracentesis again performed, and 3 litres of liquid taken away. Two litres of water injected, and 3 gr. of digitalis and 10 gr. azotate of potassium. Great improvement in the evening; respiration 12, pulse 45, temperature 100·6°. On 30th the dulness had completely disappeared on the right side, but had only diminished on the left; respiration 12, pulse 42, temperature 100·7° As the heart-sounds were slightly modified, no digitalis was given, but potassium continued. On 31st, dulness had completely disappeared and cure seemed complete, but on 2nd February a relapse was feared; the respirations were 50, and the upper half of the left lung was not breathing so well as before. Two litres of water were injected on this day, as well as on the 4th and 5th, with the best results. From the 6th February onwards the cure was regarded as complete, and on the 26th the animal was sent home in excellent health.

M. Alney stated that the pleural liquid was sown by him on bouillon and on gelose, and injected into the peritoneum of a guinea-pig. The cultures did not grow, and the guinea-pig remained unaffected.

M. Alney reported a second case, that of a fourteen-year-old mare of light build, which he treated in the same way, with equally satisfactory results. He was of opinion that the injections had contributed very greatly to the cure of the disease. He was much pleased with his success in these two cases, as he had been accustomed to see 70 to 80 per cent. of horses

die when attacked by pleurisy with abundant effusion, and that in spite of repeated thoracenteses, calomel, digitalis, and diuretics.

In the discussion which followed, M. Butel said that pleurisy in the horse was not quite so serious as M. Alney had stated. When diagnosed in time, he thought that 20 per cent. was about the rate of deaths. The prognosis of pleurisy varied according to the cases and the periods of the disease. In very acute cases, where there is effusion of a great quantity of blood, the animals nearly all die within a very brief time. Secondary pleurisy complicating pneumonia is also very dangerous, but pleurisy which arises in epizootics of infectious pneumonia is much less serious. Then, again, when taken in time recovery is the rule, but later, when the effusion has reached a third of the thorax, only about 50 per cent. recover; whilst, when the lung has become modified and the effusion has spread to the half of the thorax, and the discordance of the respiratory movements has become very marked, the patient almost certainly dies.

M. Decroix said that during his military career he had seen very few horses attacked by pleurisy with effusion recover, and had come to regard animals affected with hydrothorax, when the diagnosis was confirmed by puncture, as hopeless. He was accordingly delighted when he heard of the success of M. Brocherion, Chief Veterinary Surgeon of the 12th Chasseurs, who had not lost one animal out of eight that he had treated in his new way. The serum employed by M. Brocherion consisted of $7\frac{1}{2}$ grammes of sea salt dissolved in a litre of water. This serum is placed in a vessel holding 3 to 4 litres, which is fixed on the wall at a height of 10 to 12 feet. A very ingeniously constructed pipe allows the liquid to trickle down quite slowly, about a litre an hour. At the lower end of the pipe there is a needle for puncturing and for injection of the serum into the cellular tissue behind the upper part of the shoulder. Thus it is not into the jugular that the serum is injected, as in M. Alney's cases.

M. Brun said that in the course of the last five or six years he had performed thoracentesis four times on animals suffering from pleurisy with effusion. In the two first cases the results had been excellent, but bad in the third and fourth, in which the pleural liquid had been injected before puncture. The first two cases were horses that had been treated for pneumonia, and had reached such a stage of respiratory trouble that they were given up for lost, but M. Brun tried puncture on both, and this caused the outflow of a great quantity of a light-coloured liquid of good appearance and without special odour. The punctures were not repeated. They were made with a trocar which had been previously heated in a bath of burning alcohol. The intercostal space had been touched with a red-hot iron; a plug of wadding steeped in collodion obliterated the opening. The cure was rapid and complete, and the horses returned to the ranks as strong as any of their neighbours. There was no injection of serum at any period of the disease. The third case was that of a young mare attacked by *strangulous* pneumonia following on swelling of the limbs, with incrustations and cracks. This animal, unlike the others, received subcutaneous injections of physiologic serum—400 to 500 grammes, and even more, on the same day, for several days on end. In spite of this the disease dragged on, and about the thirty-fifth day M. Brun punctured her on the right side, but nothing came of it. A day or two later M. Cadiot wished to see the mare. He tried puncture on the right side, and had the good luck to bring out a jet of clear-coloured liquid of pretty good appearance. The

operation was repeated several times, but unfortunately the animal died. At the post-mortem she was found to have been suffering from double pleurisy in two sacs, perfectly distinct; the left was filled with clear lemon-coloured liquid, the right with dull reddish liquid, visibly infected. This led M. Brun to think that, in spite of all aseptic precautions, he had not been able to keep the right sac—the only one punctured—free from infection. M. Brun's fourth case was also one of *strangulous* pneumonia. A young mare, after being several days in the infirmary, began to show discordance in the movement of her flanks, and to present on percussion a characteristic dulness of sound. Puncture made at the usual place gave immediate outlet to a liquid of such a fœtid odour that it was almost impossible to remain beside the animal. M. Brun injected a few litres of serum into the pleura to replace a part of the evacuated liquid. Puncture was repeated next day with the same result, and finally the animal succumbed. The post-mortem revealed the most serious disorders in the lungs; their tissue contained numerous abscesses, some of which had opened into the pleura, thus rendering every attempt at cure abortive.

M. Meriveux, in the course of some remarks, said that thoracentesis ought always to be performed as early as possible for the purpose of diagnosis. It is, he said, absolutely safe if one takes the precaution to pass the trocar through a spirit flame, and to disinfect carefully the point selected for operation. What one must avoid at all costs is the entrance of air into the pleural cavity. A morsel of goldbeater's skin attached to the outer end of the canula of the trocar and acting as a valve sufficiently secures occlusion during strong inspirations. If infection of the pleural cavity has been observed after thoracentesis, it is because this precaution has been neglected, or because the operator has not observed that the effusion was infected previously. It sometimes happens that the operator, in the mistaken belief that pleurisy exists, wounds the lung when making the exploratory puncture. Such wounds have never caused fatal accidents.

(*Recueil de Méd. Vét.*)

MEAT SMELLING OF NAPHTHALINE.

A Dutch veterinary surgeon had occasion to examine at the Utrecht slaughter-house some 400 lbs. of beef, the flesh of a cow which had been slaughtered at another town and had been passed by the local veterinary surgeon. The meat seemed all right, and was sent out for sale in the usual way by the butchers, but a few hours later the purchasers brought it back to the shops, saying that it had an insupportable taste, resembling phenic acid. The Utrecht surgeon had a piece of the meat cooked, and found that it had a most extraordinary taste, which he could not, however, properly describe. He sent a piece to one of the University professors, who reported on it as follows:—"The meat is spoilt by a volatile substance which distils with water vapour. What proves that this substance is volatile is the fact that it has been only temporarily perceived by the smell in the distilled liquid. It cannot be a question either of phenic acid or creosote, for very sensitive reactives have failed to disclose the slightest trace of these products in the liquid. Judged by the smell, this substance recalls naphthaline, and on treating it with picric acid I have obtained small

needles, as is the case with naphthaline, but as we do not yet possess any reactive which reveals naphthaline with certainty, I can found only on the smell and on the obtaining of the small needles my supposition that this product is involved. The Utrecht surgeon made minute inquiries and found that the meat was the flesh of an absolutely healthy animal, which had shown nothing abnormal at the time of slaughter. He could not discover how the animal (a cow) could have ingested naphthaline, but calls the attention of practitioners to the inconvenience which may result from the administration of this substance for therapeutic purposes when the animal is intended for the market.

(*Tijdochrift voor veeartsenijkunde.*)

NEUROTOMY IN CASES OF HOCK LAMENESS.

VETERINARY-SURGEON OVERBECK reports that, having heard of so many favourable results following on section of the tibial and the peronean nerves in such cases, he determined to try the treatment on a five-year-old carriage mare. The animal was very lame on account of extensive congestion over all the internal aspect of the hock; very frequently when leaving the stable she could hardly walk, and supported herself only on the point of her toes. Three weeks after the cutting of the tibial nerve, the wound caused by the operation had become cicatrised and the lameness had greatly diminished; the external aspect was then operated on, and three weeks later a distinct improvement was observable, but the lameness had not entirely disappeared. The mare was put into harness a fortnight later, and went quite easily after a quarter of an hour's work. Next day, however, a slight lameness was observable, and at the same time a slight congestion on the inner aspect of the hock. She was put again into harness, but at the end of half an hour she stopped suddenly, and showed a fracture of the pastern of the same leg. She was ordered to be slaughtered, and the post-mortem showed a multiple fracture of the first phalange. In a second case, that of a seven-year-old mare very lame on the off-hind leg, in consequence of an enormous spavin, the same operation was performed, and at the end of five weeks the lameness had entirely disappeared; but unfortunately, after the animal had been twice in harness, she showed a very pronounced congestion of the whole of the hock, and the lameness returned with all its old intensity. The owner sold the mare, and M. Overbeck lost trace of her, but he thinks the results must have been unfavourable. He is of opinion that the operation is far from being harmless, and he bases this opinion largely on the serious arthritis which showed itself in the second case. He thinks recourse should be had to the operation only as a last resort.

(*Ibidem.*)

PERSISTENCE OF MICROBES IN MILK OF COWS WHICH HAVE SUFFERED FROM MAMMITIS.

AN epidemic of diarrhœic enteritis broke out in a household after using boiled milk. Drs. Lameris and Van Harrevelt examined the byre from which the milk had come, and found there several cows which had recently

recovered from mammitis. One animal was still suffering from the disease, which was located in one of the quarters; this latter gave only an abnormal product of secretion, which was collected aseptically, as well as the milk from the cows which had been formerly affected and were now cured. Cultivations were begun, partly with samples previously subjected to boiling, partly with others just as they were collected. The latter alone "grew." There was thus obtained, as pure culture, a streptococcus, aërobic and anaërobic, easily colourable, non-pathogenic either for the rabbit or the guinea-pig. The two doctors think there is no doubt that this microbe is the efficient cause of the mammitis, and it is really curious to notice that it was found in such abundance after several days in the apparently normal milk of cows completely cured. Boiling having destroyed the vitality of the streptococci, the diarrhœa must have been caused by toxines which had resisted the boiling. We may therefore conclude that milk from cows which have suffered from mammitis may retain its hurtfulness for at least eight days after cure.

(*Zeitschrift für Milchhygiene.*)

Notes and News.

At a meeting of the Central Chamber of Agriculture, held in the beginning of March, the following resolution was carried:—"That this Chamber considers that general legislation on the subject of the general inspection of dairies is urgently required, whereby uniform restrictions with regard to the sale of milk shall be enforced by the local authorities, subject to the control of the Local Government Board or Board of Agriculture. This Chamber also considers that powers of seizure and slaughter, with compensation, should be given for cows suffering from tuberculous udders, as recommended by the Minority Report of the Royal Commission on Tuberculosis, and that the Local Government Board should be requested to initiate such legislation."

The Board of Agriculture is informed by the High Commissioner for Canada that the Canadian Government have sent an officer specially to this country to apply the tuberculin test to all cattle over six months old for breeding purposes, and to milch cows, intended for export from the United Kingdom to Canada. This arrangement supersedes that by which the test could hitherto be applied by veterinary surgeons in this country approved of by the High Commissioner. The officer appointed is Mr. J. G. Rutherford, Veterinary Quarantine Officer of the Canadian Department of Agriculture, to whom communications regarding the testing of cattle should be addressed. His headquarters for the present are the Canadian Government Offices, 52 St. Enoch Square, Glasgow.

STERILITY IN MARES.

Sad complaints are made this year concerning the disappointments that have taken place in regard to mares. One well-known breeder told us at Kempton last Monday that he had only one foal from six mares sent to stallions last year at high fees, and another told us that his stud accounts were £700, without the fraction of a result. This should draw attention to Mr. C. Huish's plan, which most people have heard of, but, perhaps,

few have practised. That it has answered we have been well assured by unquestionable authorities, and all breeders should certainly make themselves acquainted with the subject. Mr. C. H. Huish, of Red Lion Square, London, has written a pamphlet that explains everything, and gives the experiences of some notable breeders. This should be applied for at once, as the season is progressing.—(*Sporting Life, April 13th* 1901.)

The King has accorded his patronage to the Palestine Exploration Fund, the Royal Veterinary College, the Windsor, Eton, and District Rose and Horticultural Society, and the Royal Hospital, Richmond; and has consented to continue his patronage to the Royal Photographic Society. The Queen has consented to become patron of the Westminster Training School and Home for Nurses, founded by Lady Augusta Stanley, of which Queen Victoria was patron.

FAVUS (*Tinea favosa*) in Poultry is the subject of a very useful and interesting little leaflet (No. 67) which has been issued by the Board of Agriculture. This is a disease produced by a minute parasitic fungus, scientifically named by Renak as *Achorion Schœnleinii*, which attacks the combs, wattles, neck, &c. of the fowl, causing the feathers to fall off. Sometimes only one side of the neck is affected, and becomes quite deplumed, while the other side shows no signs whatever of the attack. As a rule, however, it is the comb that suffers first and most of all from the attack. The disease is very destructive in poultry yards, and, being highly contagious, spreads with great rapidity. As the disease can be communicated to man, great care should be taken in handling diseased birds. The remedy advised is to bath the diseased parts with warm water and soap, and then applying some ointment to destroy the parasite. An ointment consisting of 5 per cent. of nitrate of soda mixed with 95 per cent. of lard has been found of great benefit; so also has one part of red oxide of mercury to eight parts of lard. But in all cases it is most essential to well foment the diseased parts before applying the ointment, and to remove all the diseased crusts as far as possible with a blunt knife.

THE WAR GAZETTE.

HONOURS AND PROMOTIONS.

(*From the London Gazette, Friday, April 19th*, 1901.)

WAR OFFICE, April 19th, 1901.

To be an Ordinary Member of the Military Division of the Third Class, or Companion of the Most Honourable Order of the Bath, in recognition of his services in connection with the campaign in South Africa, 1899-1900:—

Vet. Lieut.-Col. (local Veterinary Colonel) Iles Matthews, A.V.D.

To be an Ordinary Member of the First Class, or Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George:—

Vet.-Major Charles Rutherford, A.V.D.

To be Veterinary-Majors:—

Vet.-Capt. L. J. Blenkinsop, D.S.O.; Vet.-Capt. R. W. Raymond.

To be Veterinary-Captains:—

Vet.-Lieut. H. T. Sawyer; Vet.-Lieut. G. M. Williams; Vet.-Lieut. F. W. Wilson.

The appointment of Civilian Veterinary Surgeon D. J. Quinlan to be Veterinary-Lieutenant, as notified in the "Gazette" of April 12, 1901, is antedated to November 18, 1899.

WAR OFFICE, PALL MALL, April 16.

A despatch from Earl Roberts, K.G., K.C.B., to the Right Hon. the Secretary of State for War, War Office, London, S.W. (contains the following):—

ARMY VETERINARY DEPARTMENT.

This Department, under Veterinary-Colonel I. Matthews, has performed good work. The peace establishment being too small for the requirements of a large war, necessitated the employment of 123 civil veterinary surgeons, who, however, soon adapted themselves to the conditions of active service, and did much good work Great assistance was afforded by the excellently-organised field veterinary hospitals so kindly lent by the Government of India. These hospitals leave nothing to be desired as regards supplies and equipment, and the *personnel* of Native N.C. officers, shoeing smiths, and trained attendants rendered most valuable service. There has been a notable immunity from contagious and ordinary diseases, except glanders, of which there have been 500 cases, all of which the Department was fortunately able to quickly suppress. There has also been an exceptional freedom from horse sickness; under 200 deaths out of more than 210,000 horses and mules.—*The Times.*

CAPTURE OF LIEUT. HELEY.

No detailed account of the capture of Lieutenant Heley (of Eastbourne, a native of Wing) by the Boers has yet come to hand, but it is said that a letter received by the Newhaven relatives of a soldier at the front gives a brief outline of the affair. The writer states that Lieut. Heley was coming down the Railway with a small body of men from an outlying station where he had been inspecting the erection of some block-houses on the lines of communication. When a certain point was reached the pilot truck was derailed by an explosion. Lieut. Heley and his small body of men immediately left the train and endeavoured to keep the Boers at bay, but they were in such force that this was impossible. The Boers, who seemed to treat the matter as a joke, came up and deprived the soldiers of their good boots, leaving their old ones in exchange. The enemy then released the soldiers, but required Lieut. Heley to mount a pony, and took him away with them. No further news has at present come through as to his whereabouts. Strangely enough, two or three days before his capture he wrote to a friend speaking of his approaching return, having no idea of what was about to befall him.—*The Leighton Buzzard Observer.*

[Lieut. Heley, M.R.C.V.S., was in practice at Eastbourne, and was a keen member of the local Volunteer Artillery. He left England with a detachment last year.]

C.V.S. A. P. Hawes was discharged from hospital to duty week ended March 24th.

Mr. John M'Gregor, civilian (attached Veterinary Department), dangerously ill at Pietermaritzburg.—*The Times.*

Sailed for Home.—Left Cape Town April 23d.—Victorian Bushmen—Veterinary-Captain E. A. Kendall; Civil Veterinary Surgeons—A. H. Sugden, K. M. Molyneux, F. H. Pickett.

GEORGE FLEMING, C.B., LL.D., F.R.C.V.S.,

LATE PRINCIPAL VETERINARY SURGEON OF THE BRITISH ARMY.

THE LATE COLONEL GEORGE FLEMING.

COLONEL GEORGE FLEMING, C.B., LL.D., F.R.C.V.S., &c., Principal Veterinary Surgeon of the Army, died at his residence, Higher Leigh, Combe Martin, North Devon, on Saturday, April 13th, 1901.

Colonel Fleming was born in Glasgow, March 11th, 1833, and studied veterinary medicine and surgery in Edinburgh. While a student he obtained medals for chemistry, materia medica, essays, anatomy, best general examination, and he gained the Fitzwygram Prize for practical knowledge. He entered the Army as veterinary surgeon towards the end of 1855, and served in the Crimea until the withdrawal of the British Army in 1856. He volunteered to serve in the expedition to North China in 1859, and was present at the capture of the Taku Forts, the engagements at Tinho and Tanjkee, actions near Tanjchow, and the surrender of Peking, remaining in that country until the end of 1861. He served in Syria and Egypt in 1867. He served also in the Military Train, 3rd (King's Own) Hussars, Royal Engineers, and 2nd Regiment of Life Guards, and was appointed Inspecting Veterinary Surgeon at the War Office in 1879, and Principal Veterinary Surgeon to the Army in 1883. During his tenure of office the War Office Veterinary Department was put to the severest test by the various campaigns in Egypt and elsewhere. He was placed on retired pay June 28th, 1890, and made Companion of the Bath (Civil Division) on June 22nd, 1887. He was elected a Fellow of the Royal College of Veterinary Surgeons in 1877, received the LL.D. degree from Glasgow University in 1883, and was five times President of the Royal College of Veterinary Surgeons. He was a Fellow of the Royal Geographical Society and a Member of the Anthropological Institute and of the Pathological and Epidermiological Societies, was first President of the British National Veterinary Medical Association, received in 1875 the Prince of Wales' Medal from the Society of Arts, and in 1884 was first recipient of the Queen's Medal of the Royal Society for the Prevention of Cruelty to Animals.

While at the War Office he suggested the establishment of the Army Veterinary School at Aldershot, and directed it during the period he was Principal Veterinary Surgeon. This institution has been of great benefit to the Army as well as to the veterinary officers. It was owing to Colonel Fleming's representations and efforts that steps were first taken to establish a Civil Veterinary Department in India, that the health of Army horses has been much improved, and that Army horse-shoeing has been greatly simplified. Indeed, he was uniformly on the side of humanity to animals. He effected an immense improvement in the position and status of veterinary officers, and made it his chief object to raise the veterinary profession both socially and scientifically. In 1881, at his own cost, and after much anxiety and trouble, he succeeded in obtaining from Parliament the Veterinary Surgeons Act, which put the profession in a recognised and well-established position, and endowed it with similar privileges to those possessed by the Medical Department. He contributed largely to veterinary literature, and these contributions have had an important influence in extending professional knowledge in this country, and indeed in all English-speaking countries; several of these works have been translated into foreign languages.

He was founder and editor of the *Veterinary Journal and Annals of Comparative Pathology*. He represented the veterinary profession of the United Kingdom at several International Congresses; was appointed a Member of the General Committee, of the Sub-Committee (Chemistry and Physiology of Food), and a Juror at the International Health Exhibition of 1884, for which he received the Diploma of Honour; was one of the officials of the International Congress of Hyyiene and Demography held in London in 1891, at which he read a paper on Rabies; was elected a Vice-President of the International Congress of Hygiene and Demography held at Buda-Pesth in 1894; was appointed a Member of the Royal Commission to report on Pasteur's method of Protective Inoculation for Rabies in 1886-87, and was examined by the House of Lords' Committee on Rabies in Dogs in 1887. He had been elected Honorary Member of nearly every Veterinary Medical Association and of many scientific societies in Europe and America, and had received two valuable testimonials from the veterinary profession in the United Kingdom in recognition of his efforts to raise veterinary medicine and improve its literature.

CONTAGIOUS DISEASES ANIMALS ACTS, 1864 AND 1890.

SUMMARY OF RETURNS OF OUTBREAKS for the Four Weeks ending 13th April 1901.

ENGLAND AND WALES.

Swine Fever.	Anthrax.	Glanders (including Farcy).	Foot and Mouth Disease.	Sheep-Scab (for month of March).
Outbreaks 335 Slaughtered 1229	Outbreaks 39 Attacked 76	Outbreaks 90 Attacked 135	Outbreaks 2 Attacked 8	Outbreaks 151
SCOTLAND.				
Outbreaks 13 Slaughtered 137	Outbreaks 16 Attacked 24	Outbreaks 0 Attacked 2	None.	Outbreaks 8
IRELAND.				
Outbreaks 17 Slaughtered 527	None.	Outbreaks 1 Attacked 1	None.	Outbreaks 62

Communications, Books, Journals, &c., Received.

Agricultural Journal (Cape of Good Hope); Berliner Thierärztliche Wochenschrift; La Clinica Veterinaria (Milan); Deutsche Thierärztliche Wochenschrift; Tannoform in Veterinary Medicine (March); The Sanitary Journal; Scottish Medical and Surgical Journal; Veterinary Record; La Riforma Veterinaria; Le Mois Scientifique (Paris); L'Echo Vétérinaire (Liège); Annales de Médecine Vétérinaire (Brussels); Johns Hopkins Hospital Reports; Journal of Comparative Medicine and Veterinary Archives; Recueil de Médecine Vétérinaire; Gazette Médicale de Paris; Modern Medicine; Johns Hopkins Hospital Bulletin; Il Veterinario di Campagna (Moncalieri); Le Bulletin Vétérinaire (Orleans); Revista de Medicina Veterinaria (Bucarist); La Revista Veterinaria (Buenos Aires); Zeitschrift für Fleisch-und Milchhygiene (Berlin).